

THESIS

THE PROVISIONS AND IMPLEMENTATION OF JUST TRANSITIONS: LESSONS
LEARNED FROM COLORADO'S JUST TRANSITION

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ABSTRACT

THE PROVISIONS AND IMPLEMENTATION OF JUST TRANSITIONS: LESSONS LEARNED FROM COLORADO'S JUST TRANSITION

As the world progresses on a path towards decarbonization to achieve emission reduction and climate goals, the question of how to transition from fossil fuel energy sources arises. Transitions from fossil fuel energy sources have the potential to be “just” by addressing social and environmental justice implications. It is important to understand how to create and implement transitions that are “just”. This work explores the provisions and implementations of Colorado’s Just Transition Policy. Using qualitative analysis, it first examines and evaluates the goals or provisions of Colorado’s Just Transition Policy. It then examines whether and how the implementation of the policy is weakening, reproducing, or strengthening these goals.

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INTRODUCTION

As of 2019, the State of Colorado adopted a just transition policy to help encourage and support the on-going push away from energy derived from fossil fuels, specifically from coal. With this policy, the State of Colorado made a moral commitment to coal transition communities and coal transition workers to not “leave them behind” during the transition away from coal as a fossil fuel source (JTAC 2020). This commitment to justice as a framework for moving from fossil fuel sources to achieve emission reduction and climate goals is extremely important as other governmental institutions attempt to accomplish similar goals. Colorado’s just transition policy is one of the first of its kind, both in terms of its adoption and its implementation. This means Colorado is a leader when it comes to just transition policies and can be one the first cases that can be evaluated through research. It is important to evaluate policies, such as Colorado’s just transition policy, because by doing so, policy implementers can work towards minimizing and addressing any potential negative implications. The goal of this thesis is to evaluate Colorado’s just transition policy in terms of its provisions and implementation to better understand Colorado’s just transition. It is important to understand the provisions and goals of Colorado’s policy because it provides the foundation for how the State is conducting the implementation. To better understand Colorado’s just transition policy, the following questions will be answered: 1) – *What are the provisions of Colorado’s just transition policy; and 2) does its implementation weaken, reproduce, or strengthen the outlined provisions?* To provide a systematic and comparable examination of both questions, I employ an analytical scheme derived from the literature on just transitions.

In the first chapter I will provide important context for understanding how Colorado’s just transition came to be and information about the policy itself. The case will be placed within

the historical context about just transitions and I will close with a brief discussion on the significance of the case of Colorado. The second chapter provides a theoretical overview and identification of the literature for policy implementation and just transitions and elaborates on the analytical scheme that informs my analysis. The third chapter provides information on the data and methods used to answer the research questions. The fourth chapter identifies and evaluates the goals for Colorado's just transition in terms of my analytical scheme. In the fifth chapter I discuss the implementation of Colorado's just transition also in terms of the analytical scheme. This chapter also highlights how implementation of the transition weakens, reproduces, or strengthens the outlined goals of for the transition and what the implications for the future might be for Colorado and just transitions in general. The final chapter concludes the thesis with a brief overview of the thesis, recommendations, implications, and future research considerations.

CHAPTER ONE:

BACKGROUND AND SIGNIFICANCE OF COLORADO'S JUST TRANSITION

This chapter will provide important background information on Colorado's decarbonization and energy transition. Through this context, the reader will have a better understanding to the historical context of Colorado's just transition policy and just transitions in general. Also, there will be a brief discussion on the significance of the case of Colorado and why it is important to study.

1.1 Colorado's Decarbonization and Energy Transition

As the world continues to progress on a track that favors clean energy, many national and subnational governments are beginning to implement energy transitions from fossil fuel energy sources to renewable energy sources. These energy transitions can be made just by considering social and environmental justice implications. Across the world, there has been a small number of governments that have adopted "just transition" plans or begun the process of developing just transition plans. Some governments such as in Spain, Australia, Germany, and the European Union have all adopted just transition policies or plans. Other governments such as Scotland and Canada are in the process of developing plans. Most of these governments have only adopted policies and but have yet to implement these policies. In the case of Colorado, it is one of the first governments in the world to adopt a just transition policy and begin implementation. Colorado is providing one of the very first cases of implementation of a just transition and will provide extremely valuable lessons for other governments looking to pursue similar types of transition. Along with valuable lessons for other governments across the world, there will be a variety of implications for the other states in the United States. Colorado's case allows people to

assess the concept of a just transition and see how to implement this concept to make it successful for other energy transitions. See Figure 1 for an outline of the timeline for Colorado’s decarbonization.

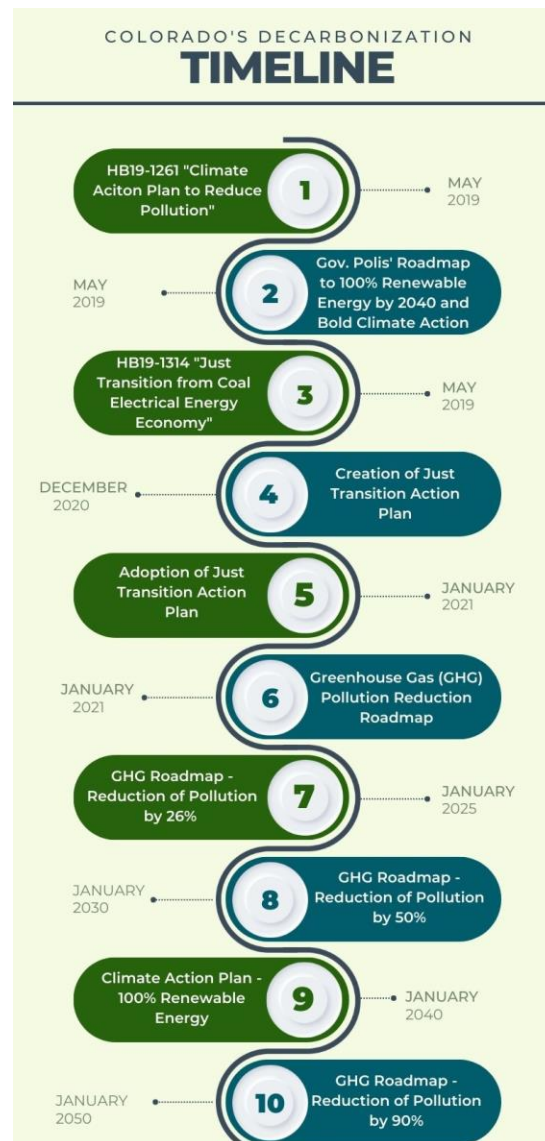


Figure 1: Timeline of Colorado’s Decarbonization Plan

Colorado’s just transition policy was spurred by Colorado’s larger decarbonization plan. In 2019, Governor Jared Polis worked with the Colorado General Assembly to pass 14 pieces of climate legislation, one being HB 19-1261 “Climate Action Plan to Reduce Pollution” (Colorado

General Assembly 2019). This legislation set “science-based targets of reducing statewide greenhouse gas (GHG) pollution 26% by 2025, 50% by 2030, and 90% by 2050 from 2005 levels” (Colorado General Assembly 2019). To achieve these goals, Governor Polis directed state agencies to develop a roadmap focused primarily on 2025 and 2030 targets (Colorado Energy Office, Governor's Office 2019). The roadmap continues to build on actions by the State to reduce GHG pollution by working with utilities to reduce pollution by at least 80% and transition to renewables (Colorado Energy Office, Governor's Office 2019). The same day, Governor Polis signed HB19-1261 into law, he released his Administration’s Roadmap to 100% Renewable Energy by 2040 and Bold Climate Action. This roadmap was created to help “drive innovation and harness the consumer savings and economic benefits of leading the transition to a clean energy economy” (Colorado Energy Office 2019). It provides a roadmap for Colorado’s long-term goal of achieving 100% renewable energy by 2040. The Polis Administration’s Roadmap lays out various action steps to achieving this goal. Some of these action steps are modernizing the Public Utilities Commission (PUC) to help facilitate a “rapid transition to renewable energy,” promoting green jobs and saving consumers money through renewable energy technology, promoting energy efficiency, increasing the amount of zero emission vehicles and commuting options, ensuring a just and equitable transition for all of Colorado, supporting local commitments to 100% renewable energy, and moving towards zero emission buildings (Colorado Energy Office, Governor's Office 2019). Through these steps, the state of Colorado hopes to achieve a clean energy future through a just and equitable transition.

Along with the Administration’s Roadmap to 100% Renewable Energy by 2040 and Bold Climate Action, in January of 2021, state agencies finalized and released the Greenhouse Gas (GHG) Pollution Reduction Roadmap. The GHG Roadmap is an action-oriented planning

process in climate leadership, pollution reduction, and clean energy transition (Colorado Energy Office 2021). This roadmap fulfills the original legislation HB19-1261 “Climate Action Plan to Reduce Pollution.” As identified in the roadmap, key steps to achieving 2030 targets are a swift transition away from coal to renewable energy, making deep reductions in methane pollution from oil and gas development, acceleration of the shift to electric vehicles, changes to transportation planning and investment and land use planning to encourage alternatives to driving, increases to building efficiency and electrification, and a reduction in methane waste from landfills, wastewater, and other sources (Colorado Energy Office 2021). These key steps position the state to make significant progress toward the 2025 and 2040 Climate Action Plan goals while providing further actions for the state to be on track to meet 2050 goals. Currently in 2023, a new bill, SB23-016 “Greenhouse Gas Emission Reduction Measures” was passed that formally committed Colorado to a net-zero target by revising the original greenhouse gas target to 100% emission reduction by 2050 (Colorado General Assembly 2023). This is another evolution to Colorado’s larger decarbonization plan.

Although the State of Colorado’s larger decarbonization plan shows a strong commitment for the state to move away from fossil fuel energy sources and develop renewable energy sources, fossil fuel energy sources are still providing extensive energy to the state of Colorado. Although as of 2022, approximately 37% of the state’s total generation of electricity has come from renewable energy sources such as wind and solar, 65% is still derived from fossil fuel sources such as natural gas, oil, and coal (U.S. Energy Information Administration 2023). Of this 65%, 36% of the state’s total electricity net generation was derived from coal fired power plants (U.S. Energy Information Administration 2023). While still one-third of the state’s electricity generation is derived from coal, this has declined significantly over the past decade (Woodruff

2021, U.S. Energy Information Administration 2023). In 2010, over “two-thirds of Colorado's electricity net generation” came from coal-fired power plants (U.S. Energy Information Administration 2021). With the decline of coal, the opportunity arose to derive more electricity from natural gas, oil, and renewable energy. With Colorado’s decarbonization plan in mind and the ongoing decline of coal, coal became a clear starting place for the overall transition from fossil fuels which will address the State’s renewable energy and emission reduction goals.

In 2019, the Colorado General Assembly passed HB19-1314 “Just Transition from Coal-based Electrical Energy Economy” (Colorado General Assembly 2019). HB19-1314 or Colorado’s just transition from coal was passed with unanimous support from the Democratic party in the state’s legislature. This legislation spurred an official “transition” from coal as an electricity source for the State of Colorado. In the larger plan for Colorado’s decarbonization, which includes achieving 100% renewable energy and emission reductions from all fossil fuel sources, this legislation only addresses coal. An important highlight of this legislation is the importance of supporting coal workers and communities during the transition away from coal. Some specific actions of this legislation were the creation of a “just transition office, advisory committee, just transition plan, and workforce transition plan” (Colorado General Assembly 2019). The initial legislation appropriated \$155,758 from the general fund to the Department of Labor and Employment and \$920 from the general fund to the General Assembly for implementation (Colorado General Assembly 2019).

The main goal of HB19-1314 “Just Transition from Coal-based Electrical Energy Economy” was the creation of the Just Transition Action Plan. This plan was developed from May 2019 to December 2020 through deliberations by the Colorado Just Transition Advisory Committee (JTAC) with input from “stakeholders, issue experts, state agencies, and members of

the public” (“Colorado Just Transition Action Plan” 2020). In January 2021, the plan was finalized and approved by Governor Jared Polis, executive directors of the Colorado Department of Labor and Employment (CDLE) and the Colorado Department of Local Affairs (DOLA). The overall aim of the plan is to “help each [coal] community end up with more family-sustaining jobs, a broader property tax base, and measurably more economic diversity” (“Colorado Just Transition Action Plan” 2020). To achieve this, there are specific goals of “align[ing] state and federal programs to assist local strategies, target early successes in business start-ups, expansions, retention, and attraction, empower communities with resource to drive their own economic transitions, coordinate infrastructure investments to support local and regional transition strategies, identify and support, state, regional, and local institutions to facilitate needed investments, and attract grants and investments to power local economic growth” (“Colorado Just Transition Action Plan” 2020).

1.2 Colorado’s Just Transition in Historical Context

Before analyzing Colorado’s just transition, it is important to understand how this concept came to be. The idea of a just transition originally emerged in North America during the 1970s labor movement when Tony Mazzocchi, a trade union leader representing Oil, Chemical, and Atomic Workers’ Union (OCAW) “sought the support of environmental groups to help fight the Shell company over safety and health issues affecting workers” (Pai et al. 2020). Unlike other concepts, just transition did not arise from theoretical debates “over environmental justice or sociotechnical transitions” but in response to worker issues (Stavis, Morena, and Krause 2020). Mazzocchi and unionists recognized that the industries they were employed by were causing environmental degradation, but there was also concern for the livelihood and well-being of workers in these industries. This time was marked by a rise in “occupational safety and

health” concerns that would embed within the environmentalist movement (Just Transition Research Collaborative 2018). Mazzocchi sought a way to “protect the jobs, incomes, and working conditions” of union members while recognizing the environmental dilemmas that exist (Mazzocchi 1993). While not originally defined as a “just transition,” Mazzocchi continued efforts to reconcile environmental and social concerns (Stavis, Morena, and Krause 2020). During this time, there was ongoing conflict between jobs and the environment where workers desired jobs while having a clean environment but not having clear steps to accomplish this goal (OCAW 1991). Like Mazzocchi, other unionists continued to be interested in the debate on jobs versus the environment (Morena, Krause and Stavis 2020).

The growing discourse of jobs versus the environment continued to be fueled in response to increasing environmental regulations by the United States Federal Government (Pai et al. 2020). Members of OCAW and other unions were concerned for the environment like other people within the country. Workers wanted a clean environment, which regulations would help address, but these regulations posed further concerns for jobs and income (OCAW 1991). These concerns led to thoughts of a program for people that care about the environment while needing the protection of their jobs and income (OCAW 1991). Mazzocchi and other unionists advocated for the Superfund for Workers which was a proposed social program like the GI Bill after World War II. The GI Bill was a piece of social legislation that assisted post-war veterans through providing benefits to support veterans seeking school and training programs (OCAW 1991). A Worker Superfund would carry this same concept and help transition workers into new jobs that would otherwise be abandoned by industries, like veterans finding different livelihoods post-war. Advocates for a Superfund for Workers believed that post World War II showed the most “radical transition” accomplished by the United States and that the precedent for transition

assistance has already been set (OCAW 1991). Although advocates argue that the United States is in a similar transition period, there is a lack of a social vision and there is a need for a “massive restructuring of the world of work” (OCAW 1991). This initial effort by the labor movement has since birthed the concept of a just transition. A just transition is the product of the efforts to “reconcile environmental and social concerns” within the jobs versus environment discourse (Just Transition Research Collaborative 2018).

The idea of a just transition is a vision, framework, and process guided by certain principles, such as social and environmental justice, based on “geographical, political, cultural, and social contexts” (IISD 2018). Originally, the concept was centered on workers due to its rise from the labor movement but has since expanded. With time, the concept of a just transition has evolved into a paradigm to address growing concerns about the climate crisis, decarbonization, and sustainable development while simultaneously addressing social justice and environmental justice issues for all people, rather than only workers (Carley, Sanya, Konisky 2020; Heffron and McCauley 2018). At the center, a just transition seeks to leave no one behind through economic and societal transformation (ITUC 2017). The concept of a just transition has led to the specific idea of a just energy transition which centers equity and justice during the movement towards a low carbon or zero carbon world. An energy transition changes and shifts the way that people “produce and consume energy using different technologies and sources” (IISD 2018). While the definition of just transition varies depending on the organization defining it, the main understanding is that a just transition is a plan for a low carbon future based on sustainable jobs, a green economy, and renewable energy (McLeod 2006).

1.3 Colorado's Significance

Decarbonization and the transition from fossil fuels is progressing not only in Colorado but across the United States and globally. The State of Colorado aims to have 100% renewable electricity generation by 2040 and to reduce greenhouse gas emissions by 100% by 2050 (Colorado Energy Office 2021). Colorado is the first state within the United States to adopt and begin the implementation of a just transition policy. This is important because Colorado will not only guide other states but can also guide the federal government on how to implement a just transition. Also, not only does the case of Colorado provide valuable information on just transitions for the United States, but it also provides valuable information globally. As one of the few subnational governments to adopt a just transition, and part of the even fewer implementing one, many governments worldwide are watching Colorado. The case of Colorado will help inform other policies and provide valuable information about how to implement a just transition. This case will allow policymakers to look at the concept and implementation of a just transition to see what works and does not work.

It is important for Colorado to be a leader on how to approach an energy transition in a just and equitable way, meaning the state must address social and environmental justice concerns. The goal of a just transition is to provide an opportunity to create a win-win scenario where the State can address fossil fuel emissions which directly impact climate change, while utilizing a just transition to address previous, current, and future social and environmental justice concerns for communities and workers. In the case of fossil fuels beyond coal, an emerging issue in Colorado has been whether to include oil and gas within the current transition and if the Office of Just Transition should lead on the transition from oil and gas. The transition from coal will be informative for potentially addressing oil and gas in the future. Also, it is important to

acknowledge that the policy's implementation could create more social and environmental justice issues which would directly affect the original goal of the legislation. Colorado has framed its legislation as a just transition policy so to truly be a just transition, the state must address social and environmental justice issues. As this policy progresses, it is important to ensure that the state is not exacerbating social and environmental justice issues in service of the transition from fossil fuels.

CHAPTER TWO:

ANALYTICAL SCHEMES FOR UNDERSTANDING THE PROVISIONS AND IMPLEMENTATION OF JUST TRANSITIONS

This chapter addresses how evaluating the implementation of a policy is valuable to understanding if a policy, such as Colorado's just transition policy, is weakening, reproducing, or strengthening its outlined provisions. This chapter also provides an overview and identification of the literature's main analytical schemes for just transitions. This chapter will highlight the analytical scheme of Mijin Cha et al.'s (2019) *A Roadmap to an Equitable Low-Carbon Future: Four Pillars for a Just Transition*, which has informed the analytical scheme for this research. Along with this analytical scheme, there will be justification for the creation of a fourth pillar of justice. This pillar will encompass social and environmental justice as supported by literature. This chapter will provide theoretical grounding for addressing the research questions 1) – *What are the provisions of Colorado's just transition policy; and 2) does its implementation weaken, reproduce, or strengthen the outlined provisions?*

2.1 The Policy Cycle – Understanding Policy Implementation

The Policy Cycle Framework provides a useful way for analyzing Colorado's just transition when looking at the transition specifically from the implementation stage. The implementation stage allows for an assessment of whether a policy is weakening, reproducing, or strengthening its outlined provisions or goals. In the case of Colorado, it is important to assess how the policy is faring during implementation because this will let policy practitioners adjust the policy if it is not meeting the outlined provisions of the policy. For instance, if Colorado's just transition policy has ambitious provisions for social justice, but it is not meeting these

provisions, this would be a cause of concern. By using the policy cycle framework, the stage of implementation can be individually assessed to identify any concerns. The Policy Cycle Framework has been a way to simplify public policymaking for analytical purposes and to understand public policymaking not as a process but as “interrelated stages through which policy issues flow in a more or less sequential fashion from inputs (problem recognition) to outputs (policies)” (Howlett, Ramesh, Perl 2020).

For the case of Colorado, a focus on policy implementation is important because it will help inform the transition in Colorado and elsewhere. Currently, there are a variety of just transitions that are occurring globally. These transitions range from subnational, to national, to transnational. Many of these policies are in the early stages of the policy process and have yet to be implemented, unlike in the case of Colorado where implementation is ongoing. In the policy cycle, implementation is the part of the process in which actors try to convert outlined provisions or goals into specific outputs. Actions taken by implementors can cause differing outcomes than the ones outlined in the provisions which is important to assess (Howlett, Ramesh, Perl 2020).

Research on policy implementation originally emerged as an effort to “understand the missing link between the expression of government intention and the world of action and results” (Imperial 2021). In the literature, implementation theory has changed substantially over the past 30 years and is still considered to be fractured into a variety of “proto-theories” resulting in no single approach to study implementation activities (Howlett 2019). Many scholars have categorized analytic models for implementation into First-, Second-, and Third generations of implementation research (Cerna 2013; Howlett, Ramesh, Perl 2020; O’Toole 2000; Schofield 2001). The first-generation model largely borrowed from the study of public administration and led to a focus on policy output and quasi-scientific measurement of policy implementation

(Schofield 2001). This generation sought largely to identify factors to describe the implementation process (Schofield 2001). The second-generation model, borrowing from organizational theory, sought to predict policy outcomes through analytical typologies which concentrate on which variables positively or negatively impacted a policy outcome (Schofield 2001). Highlighting this generation, was a large debate on the appropriate focus for describing and analyzing subjects through either a top-down or bottom-up approach. Top-down theorists saw policy designers as central actors and believed that “implementation beg[an] with policy or legislative objectives, and that the processes of implementation will follow on in a fairly linear fashion” (Schofield 2001). Bottom-up theorists focused on the “motives and actions of actors” at a local level, instead of central actors and central policy (Schofield 2001). Through the debates on ‘top-down’ vs ‘bottom-up,’ scholars now agree on the points that “where leverage is most appropriately placed in the implementation system continue to be important in practical terms” and “variables located at the top or center can be important, as can contextual or field variables” (O’Toole 2000).

Third-generation models arose due to criticism that both the first- and second- generation models did not provide comprehensive synthesis or a unifying approach to analysis of implementation (Schofield 2001). This type of model addresses these issues by using a wide variety of methodological approaches such as network analysis, content analysis, social experimentation, interviews, and questionnaires (Goggin et al. 1990). In recent years, there has been discussion on the potential for a fourth-generation model. This model takes a deeper look at capacity issues underlying effective implementation (Howlett, Ramesh, Perl 2020). Resource and operational capacity play a key role in how relevant agencies carry out plans and programs and thus are an important topic for implementation research. In summary, the third and fourth

generation models look largely at the capacity and resources for policy implementation. When assessing implementation, capacity and resources attributed to this stage play a large role. When there is less capacity and resources dedicated to a policy than needed to achieve intended provisions/goals, this causes differences in the intended outcomes. Such as in the case of Colorado, if the State has outlined ambitious provisions/goals for social justice but does not provide the adequate capacity and resources needed to achieve these provisions/goals, the intended outcomes created will be different and what was originally envisioned. Analysis of capacity and resources, as seen through the third and fourth generation models will play a pivotal role in the analysis of the implementation of Colorado's just transition.

2.2 Program Evaluation as a Tool to Analyze Implementation of Just Transitions

Policy implementation will play a key role in the success of just transition policies. As seen in the implementation literature, there is no 'one size fits all' theory to be applied but there are a variety of important key ideas, such as a focus on capacity and resources, which are important to assessing policy implementation. These key ideas will directly or indirectly affect policy outputs and outcomes. To best evaluate the implementation of a just transition policy, it is important to keep these key ideas in mind. Also, another layer must be added for what framework is guiding the evaluation of a just transition policy, which will be discussed in the next section.

Since the case of Colorado has begun implementation, the policy's implementation can be assessed through program evaluation. Program evaluation looks at determining whether the implementation of a specific program or policy is achieving the intended provisions/goals. This method helps implementors identify any program or policy failures and allows for implementors to adjust the program or policy to address the failures. Simply a program evaluation on the

implementation of Colorado's just transition will allow practitioners to assess whether the transition policy in the implementation stage is operating as planned and working towards addressing the provisions laid out by the policy. An assessment using program evaluation will uncover whether implementation is weakening, reproducing, or strengthening the intended provisions/goals of the policy. To help better understand how these provisions/goals are identified, the next section will discuss the chosen analytical scheme for the case of Colorado.

2.3 Analyzing Just Transitions

There are a variety of ways to frame and approach just transitions. Many of the early approaches take guidance from the sustainable development literature (Connelly 2007, Hopwood et al. 2005). This is because sustainability literature has many overlapping features that coincide with the vision for a just transition which includes how to balance environmental protection, social justice, and economic growth (Connelly 2007). While derived from literature on sustainability, frameworks for just transition have grown into its own literature. One of the main typologies of just transition was created by the Just Transition Research Collaborative (JTRC). This typology looks at how to view just transitions on an axis ranging from status quo to managerial reform, structural reform, and transformation (JTRC 2018). A status quo approach calls for "voluntary, bottom-up, corporate, and market-driven changes," rather than changing rules of the political economy (JTRC 2018). A managerial reform approach to just transition would seek greater equity and justice within existing economic systems "without challenging existing hegemony" (JTRC 2018). Structural reform of this approach looks at securing both distributive and procedural justice through institutional change and structural evolution (JTRC 2018). A transformative approach suggests an "overhaul" of economic and political systems that have been considered responsible for "environmental and social crises" (JTRC 2018).

The idea of a necessary transformation for the environment and society has been used considerably within the just transition framework literature and has since branched off into its own transformation literature. Many approaches and frameworks for just transitions call for or consider the need for a transformation of the current political economy (Hopwood et al. 2005; Stevis and Felli 2015; Stevis and Felli 2016; Just Transition Research Collaborative 2018; ITUC 2017, Healy and Barry 2017; McCauley and Heffron 2018; Anderson 2021; Cha 2019). An increasing amount of just transition framings not only emphasize the need for transformation but look to broaden the scope for the inclusion of “women, indigenous peoples, people of color, lesbian, gay, bisexual, transgender, queer, and intersex people” (Just Transition Research Collaborative 2018). Many of these organizations call for frameworks to be transformative due to how current economic and political systems may uphold the current hegemony which would typically exclude these groups.

Framing of just transitions has not just occurred at the scholarly level but at organizations that focus on labor issues such as the International Trade Union Confederation (ITUC) and the International Labor Organization (ILO) which have called for their own demands and guidelines for a just transition. These frameworks provide analytical alternatives to those suggested in the academic literature. The ITUC highlights the importance of social dialogue in the creation of a just transition and the necessity that at its heart, “a just transition requires us to leave no one behind” (ITUC 2017). In the viewpoint of the ITUC, for a just transition to succeed, active participation from workers, employees, and governments is required and this is facilitated by ongoing social dialogue (ITUC 2017). The ITUC proposed a list of 9 demands for a just transition. The demands are highlighted by the ideas of respecting, involving, and investing in workers and communities, supporting innovation and technology to accompany an energy

transition, formalizing plans for just transitions, guaranteeing social protection and human rights, and full funding of a just transition in every nation (ITUC 2017).

The ILO's guidelines for a just transition follow similarly to the demands of the ITUC. The first principle highlights the importance of social consensus and dialogue at all levels with all relevant stakeholders (ILO 2015). The other guidelines are: the necessity for policies to respect, promote, and realize fundamental principles and rights at work; policies and programs to take into account gender dimensions; coherent policies across economic, environmental, social, education/training, and labor portfolios; policies providing a just transition framework for creation of decent jobs, impacts on employment, social protection, skill development, and social dialogue; no "one size fits all" strategies on policies; and implementation of sustainable development strategies (ILO 2015). Along with guidelines, the ILO provides key policy areas for environmental, economic, and social sustainability of a just transition which include macroeconomic and growth policies, industrial and sectoral policies, enterprise policies, skills development, occupational safety and health, social protection, active labor market policies, rights, and social dialog and tripartism (ILO 2015).

While these just transitions vary on what approach or framework they might use, there are some key components of a just transition that have been identified across the just transition literature. An extensive review of 33 academic articles focused on just transition to identify the key elements or strategies of just transition (Pai, Harrison, Zerriffi 2020). In their review, they found that there are 17 key elements or strategies ranging across the just transition literature. The key elements for a just transition identified are: long term planning, the role of unions, community engagement, local jobs and diversified economies, coal as an identity, the gender gap in energy sector jobs, education/research institutions, worker pensions, just transition principles

and the planning, legislative and regulatory process, job quality, job guarantees and compensation, worker transition service, local infrastructure development, local government revenue streams, communication of phase-out-plans, environmental remediation, and retraining workers (Pai, Harrison, Zerriffi 2020).

2.4 The Key Pillars for Analyzing Just Transitions

While many scholars have sought a way to frame just transitions, Mijin Cha et al.'s (2019) *A Roadmap to an Equitable Low-Carbon Future: Four Pillars for a Just Transition* provides a useful analytical scheme, particularly for the case of Colorado and potentially for other transitions. For the case of Colorado, the policy's design and focus aligned largely with Cha et al.'s pillars. Cha et al.'s analytical scheme is highlighted by four pillars that are necessary for a successful transition. These four pillars being the presence of Strong Governmental Support (short- and long-term), Dedicated Funding Streams (short- and long-term), Strong Diverse Coalitions (short- and long-term), and Economic Diversification (short- and long-term) (Cha et al. 2019). For the case of Colorado, there will not be an inclusion of the pillar of Strong Diverse Coalitions. The reasoning for excluding diverse coalitions from the analysis of Colorado is because in preliminary research, it was clear that diverse coalitions were not a main focus for the policy and plan. The justification for this exclusion will be elaborated on further in a following section. Something else to note is that there is a key pillar missing from this analytical scheme. This pillar being one of justice that encompasses both social and environmental justice. For the case of Colorado, a justice pillar, which will be discussed in the following section, will be fused with the already created Cha's Four Pillars.

The pillar of Strong Governmental Support is defined as policies and programs that provide governmental support to workers and communities as they face implications from the

scale and scope of the transition away from fossil fuels (Cha et al. 2019). This pillar assess governmental support for the transition in terms of policies and programs. Strong governmental support is achieved through consistency and active support of the transition in both the short- and long-term. Some examples of policies or programs that constitute short-term strong governmental support are unemployment benefits and retraining programs to support workers and communities (Cha et al. 2019). These policies are ones that provide “immediate support to communities and workers” (Cha et al. 2019). Some examples of long-term policies or programs that constitute strong governmental support are ones that support the restructuring of local economies and transforming former fossil fuel sites. These types of policies help to “restructure local economies and transform former fossil fuel sites” (Cha et al. 2019).

The pillar of Dedicated Funding Streams consists of policies or programs that provide extensive and consistent funding to help support workers and communities facing implications from transitions. Dedicated funding will be necessary to support transition programs and policies. In the short-term, there are needs for wage replacement or replacement of lost tax revenue while in the long-term, there are needs for new business development and funding of long-term worker training and retraining programs (Cha et al. 2019). Without dedicated funding streams in the short-term and long-term, there could be limitations to the success of the transition programs and policies. Some examples of policies or programs that would constitute dedicated funding streams would be those that identify and dedicate funding resources specifically to the transition to support the needs of workers and communities.

Another pillar within the analytical scheme of Cha et al., is the pillar of Strong Diverse Coalition. The pillar of Strong Diverse Coalitions seeks to create coalitions with a “shared goal” between “workers, community members, businesses, utilities, and environmentalists” to create

“thriving communities with strong economies and clean air and water” (Cha et al. 2019). Strong Diverse Coalitions must have a wide range of participating stakeholders that have been a part of the policy process since inception. Like in other transition policies, diverse coalitions have not been a focus of Colorado’s transition. This is because many transition policies have come to fruition without the support of diverse coalitions. For instance, in the case of Colorado, it was previously noted that the just transition policy was passed only with partisan support in the Democratic party. A lack of bi-partisan agreement about the initial policy showed a lack of diverse coalitions from the inception of the policy. Along with this, the policy and Just Transition Action Plan were created specifically for coal transition workers and coal transition communities, not necessarily for broader coalitions. Also, while it was the intention for the Just Transition Action Committee to be diverse and representative, this has not necessarily been the case as there have been missing stakeholders, particularly for environmental justice communities. There are coalitions of a variety of actors such as unions, utilities, and policy makers, but the JTAP is not fully encompassing of all stakeholders for Colorado’s transition. Due to the lack of strong diverse coalitions in the creation of the initial policy and provisions, assessing diverse coalitions during implementation would not provide information that was not already clear from the inception of the policy. It should be noted, that although diverse coalitions will not be analyzed, the absence of diverse coalitions should be something for implementors to note to better improve for the future of implementation.

The final pillar of this analytical scheme is one of Economic Diversification. This pillar is defined as policies and programs that focus on diversifying economic bases. This is key to a comprehensive transition because an overreliance on a single industry or sector leaves “communities and workers extremely vulnerable when the industry or sector declines” (Cha et al.

2019). Some examples of policies or programs that represent this pillar are ones that seeks to create a vision for an economy that “re-imagines local economies free of fossil fuel infrastructure” and create the “implementation of community visioning” in the movement from a singular industry (Cha et al. 2019). Economic diversification policies and programs are usually specific to the context they are applied to so it is difficult to provide specific policy or program examples but any policies or programs that will alter the current economic state of communities affected by transitions are ones of economic diversification.

After conducting this literature review, it was clear that Cha et al.’s analytical scheme aligns best for analyzing the case of Colorado due to the structure of Colorado’s just transition. With the creation of the Office of Just Transition, Colorado’s just transition is set to provide some level of governmental support, as suggested to be a necessary component for a just transition by the Four Pillars approach. Also, in Colorado’s Just Transition Action Plan (JTAP), there is a large focus on the components of governmental support, dedicated funding streams, and economic diversification, all of which are key portions to the Four Pillars Approach. But, when considering the case of Colorado, there is less of an emphasis on diverse coalitions. This lack of emphasis will mean there is less utility to analyzing Colorado’s case with this pillar. Therefore, I propose to replace this pillar with a pillar of Justice. The pillars approach will be used to see how Colorado’s just transition stands within the pillars and how it is performing with consideration of the pillars. The following section will expand upon the pillar of Justice.

2.5 Pillar of Justice – Social and Environmental Justice

A pillar of justice provides information to understanding and analyzing Colorado's just transition. This pillar will look at both social and environmental justice. Colorado’s case can benefit from the evaluation of justice because the intended goal is to have a “just” transition, so

without this pillar, there will be a lack of an evaluation of justice. This means there needs to be an evaluation of both social and environmental justice components of the transition to decide whether this transition is truly “just.” Justice is a key part of just transitions as the concept has been largely influenced by both social justice movements and the environmental justice movement. Although, the case of Colorado is interesting because alongside efforts for a just transition, there is separate legislation and efforts to work on environmental justice. It will be further investigated to see whether Colorado’s just transition policy is focused solely on social or environmental justice, if one is addressed more than the other, or if both are addressed.

The idea of a just transition was originally rooted in social justice movements for the protection and support of workers. Then the idea was expanded by the environmental justice movement to include the support for communities who bear the pollution burden from a fossil fuel economy, but “have been largely shut out of the economic benefits and fossil fuel jobs (Cha et al. 2021). Both social and environmental justice concerns should be acknowledged when thinking about a just transition. As the transition to a clean energy economy continues, such as the transition in Colorado, there will need to be immediate and long-term needs for workers and communities.

Social and environmental justice have been discussed extensively within the just transition literature. Some scholars look at the variety of types of justice such as distributional, procedural, recognition, and restorative justice and how these types exist within just transitions and more specifically energy transitions (Farrell 2012; Heffron and McCauley 2018; Heffron and McCauley 2018; Evans and Phelan 2016; Healy and Barry 2017). Distributive justice refers to the inequitable distribution of harms (for example, pollution) and benefits (for example, parks and infrastructure) (Farrell 2012). Procedural justice refers to fairness in the decision-making

process, specifically concerning public participation and involvement. Recognition justice refers to respect for all people “for who they are and where they live” (Russo and Martin 2020).

Restorative justice “aims to repair the harm done to people, society, and/or nature” and makes society “think about how to respond to injustices that have occurred” (Heffron and McCauley 2017). Other scholars take a further step to develop frameworks that look at identifying differences in social and environmental justice within just transitions and the role that social and environmental justice play within the frameworks of just transitions (Stavis and Felli 2015, Stevis and Felli 2016, McCauley and Heffron 2018).

Much of the discussion of the role in social justice was originally focused on only fossil fuel workers but has been expanded to looking at the broader energy system and how distributional impacts are felt across the entire system (Healy and Barry 2017, Heffron and McCauley 2017). With the transition away from fossil fuels, every sector and segment of society will be impacted (Cha et al. 2021). It is important to address the social implications for all parts of society. To address these social implications, there has been a call for the consideration of energy justice as a primary focus for just transitions (Healy and Barry 2017; Heffron and McCauley). Energy justice looks at the importance of justice and equity concerns in the context of a just transition and the expansion of socio-economic concerns of the energy transition (Healy and Barry 2017). Energy justice applies – distributional, procedural, and recognition justice to the entire energy system (Heffron and McCauley 2017). This means applying every type of justice to energy transitions by looking at how every sector and segment of society are affected. For example, for fossil fuel workers, there will be extensive impacts during the transition away from fossil fuel. These impacts will require immediate need for new jobs, job guarantees and compensation, education and retraining, worker transition service, and communication of plans

(Pai, Harrison, Zeriff 2020). Not only will fossil fuel workers see immediate impacts, but there might be impacts to the availability, affordability, and reliability of energy for communities that had previously been receiving their energy from former fossil fuel energy sources.

Along with social justice, environmental justice plays a key role in a just transition. The Environmental Justice Movement has been at the front of addressing the effects of the fossil fuel economy on low-income communities and communities of color that have been disproportionately impacted by pollution (Farrell 2012). The Environmental Justice Movement provides a helpful approach to identifying and addressing disparities within the transition away from a fossil fuel economy. Environmental justice looks at how benefits and burdens of pollution are distributed, how decisions are made, and how the “environmental, political, economic, and cultural aspects of people’s lives are interconnected” (Farrell 2012). The 17 Principles of Environmental Justice, drafted and adopted by the delegates to the First National People of Color Environmental Leadership Summit in 1991 serve as guiding principles for the environmental justice movement. These principles have guided advocates of environmental justice to define “environmental justice” as the basic right of people to live, work, go to school, play, and pray in a healthy and clean environment (Bullard 1994). These lessons from the environmental justice movement help to inform an environmental justice framework in just transitions. This framework includes: “(1) the need for environmental policy that explicitly requires equity, (2) the necessity for communities currently affected by the pollution of fossil fuel industries to be involved at the outset in planning the transition to avoid the problems and maximize the solutions, and (3) the need for a holistic approach in designing the transition to a cleaner economy” (Farrell 2012).

Some scholars have built off the idea of the relationship between humans and the environment to analyze environmental justice in a just transition. These frameworks provide a specific emphasis on environmental justice with the goal of utilizing these frameworks to achieve distributional, procedural, and recognition justice during just transitions. There are arguments that just transition must consider nature to bridge a gap between social and ecological components of justice (Stavis and Felli 2015). These frameworks can address ecological justice and/or environmental justice within the political economy's current bounds (Stavis and Felli 2015, Stavis and Felli 2016). These approaches take a specific look at identifying differences in justice for nature or the ecology and justice for humans. Through the variety of approaches and frameworks of just transition, it is important to recognize the continuous call for transformation to achieve a just transition.

The “Justice” pillar combines both social and environmental justice to allow for analyzation of the case of Colorado with respect to justice. A combination of policies and/or programs that support equity and justice for workers and communities in terms of distributional, procedural, recognition, and restorative justice will make up the social justice components of the “Justice” pillar (Heffron and McCauley 2017). Some examples of policies or programs that might support any of the types of social justice are identifying distributional impacts on workers/communities, including workers/communities within the process of implementation of the transition, recognizing the current and historical impacts of the transition on workers/communities, and working to create a more equitable and just future for workers/communities. For the pillar of environmental justice, the Principles of Environmental Justice in combination with the environmental justice framework of: “(1) the need for environmental policy that explicitly requires equity, (2) the necessity for communities currently

affected by the pollution of fossil fuel industries to be involved at the outset in planning the transition to avoid the problems and maximize the solutions, and (3) the need for a holistic approach in designing the transition to a cleaner economy” will make up the environmental justice components of the “Justice” pillar (Farrell 2012). Some policies or programs that might prove as examples for this pillar will be ingraining equity and environmental justice into all actions, assisting communities suffering from pollution of fossil fuel industries in planning for a future to avoid problems and maximize solutions, and interweaving environmental justice into other policies and programs such as those related to economic diversification and social justice.

Through Cha et al.’s (2019) analytical scheme, with the inclusion of a pillar of justice, the provisions for Colorado’s just transition will be identified, and it will be clearer how the implementation of the transition is progressing. It will be important to assess how implementation is fairing in relation to the analytical scheme, with specific focus on if implementation weakens, reproduces, or strengthens the outlined provisions. With this knowledge, policymakers will be able to alter the course of implementation to better address any weaknesses or to further support strengths.

CHAPTER THREE: DATA AND METHODS

This chapter will provide information on the data and methods used to answer the research questions 1) – *What are the provisions of Colorado’s just transition policy; and 2) does its implementation weaken, reproduce, or strengthen the outlined provisions?*

3.1 Data Sources

The data used for this study consists primarily of primary documents from the State of Colorado’s Office of Just Transition (OJT) including Word documents, PDFs, meeting notes, and meeting recordings. Other primary documents from the State of Colorado’s Department of Public Health and Environment (CDPHE) have been used to help aid in analysis. One of the main sources of data is the Just Transition Action Plan (JTAP). This data source will be the primary source used to answer research question 1) – *What are the provisions of Colorado’s just transition policy*. For the following question, 2) *does its implementation weaken, reproduce, or strengthen the outlined provisions?*, documents created during implementation will be used. These documents consist of an assortment of information ranging from guidance on distribution of funding, general funding memos, outlines of other legislation that has been adopted that is related to just transition, the expenditures of the OJT, important legislative statues related to just transition, drafts of surveys distributed to workers and communities, and memos about legal processing with the Public Utilities Commission (PUC). These documents and supporting secondary documents such as reports, or local news will help guide evaluation. Following the creation of the Just Transition Action Plan (JTAP), the OJT has documented the implementation of the transition with a variety of resources. One significant resource used is meeting packets, recordings, and transcripts of quarterly meetings for the Just Transition Action Committee

(JTAC). These meetings were not pre-transcribed and as such are put through a transcription program. By uploading these meetings to Microsoft Stream, automatic transcriptions have been created. These meetings have been open to the public and allowed the JTAC to discuss the transition's implementation and provide updates to attending committee members and/or public. These meetings have been supported by meeting packets that provide various documentation of the implementation such as word documents or PDFs.

3.2 Developing a Codebook for Just Transition

To answer the research questions, I propose the following codebook to qualitatively code just transition policies and implementations based on a given analytical scheme. This codebook, as seen in Table 1, has been created by combining the analytical scheme of Cha's Four Pillars along with a created Justice pillar derived from the literature on social and environmental justice in just transitions. This codebook will allow scholars to systematically code just transition policies to see how the provisions/goals for transitions align with the key pillars and thus how implementation either weakens, reproduces, or strengthens those pillars. This will allow scholars to better understand the policy and thus be able to better assess the policy during the implementation stage to see if implementation is leading to outlined provisions/goals. Based on Cha's analytical scheme along with the just transition literature, general code descriptions have been developed to better clarify what each theme or pillar means. Each pillar, except the pillar of Justice, is defined by time. Pillars in the short-term are defined by policies and/or programs that occur within one to five years from the beginning of implementation in January 2021. This timeline was chosen because many of the initial goals for the transition were expected to be reached within one to five years according to the JTAP and how funding has been acquired

through legislation following the approval of the JTAP. Pillars in the long-term are defined by policies and/or programs that will occur within longer than five years.

Each pillar is defined not only by the timeline but by the types of policies and programs. The following policies and programs outlined are merely examples and are not representative of every policy and program that might be present. For Governmental Support, examples of policies and programs that would show this pillar are the organizational commitment by the State of Colorado to the transition, collaboration across State agencies, increased capacity and resources for the Office of Just Transition and supporting agencies, and increased responsibilities and powers of the Office of Just Transition. For Dedicated Funding Streams, some specific policies or programs for this pillar are collaborations with State agencies and the legislature to secure funding specifically for the transition, working with external sources such as NGOs and philanthropic organizations, and holding utilities accountable by securing guaranteed funding. Policies and programs that can be defined as signs of the pillar for Economic Diversification are ones that encourage diversification efforts in coal transition communities such as plans for workshops, general community engagement on economic diversification, investment in coal transition communities for economic diversification, and collaboration with other State agencies that specialize in economic diversification. For the pillar of Social Justice, examples of policies and programs that reflect this pillar are ones that promote the principles of distributional, procedural, recognition, and restorative justice for workers and communities such as ones with a specific focus on community engagement, financial investment in workers and communities, and advocacy for workers and communities across State work. Lastly, for the pillar of Environmental Justice, examples of policies and programs that reflect this pillar are ones that address and

promote the Principles of Environmental Justice such as community engagement, remediation of polluted sites, and investments in communities to address environmental injustices.

Table 1: Codebook for Just Transitions

Theme	Theme Description
Governmental Support	Short-Term (1-5 years) & Long-Term (5+ years) -Organizational commitment by the State of Colorado -Collaboration across State agencies -Increased capacity and resources -Increased responsibilities and powers of the Office of Just Transition
Dedicated Funding Streams	Short-Term (1-5 years) & Long-Term (5+ years) -Collaboration with State agencies and the legislature to secure funding from the State for the transition -Working with external sources such as NGOs and philanthropic organizations for dedicated funding sources -Holding utilities accountable by securing guaranteed funding
Economic Diversification	Short-Term (1-5 years) & Long-Term (5+ years) -Community engagement on economic diversification -Investment in coal transition communities for economic diversification -Collaboration with other State agencies that specialize in economic diversification.

	Social Justice	Environmental Justice
Justice	-Community engagement -Financial investment in workers and communities -Advocacy for workers and communities across State work	-Community engagement -Remediation of polluted sites -Investments in communities to address environmental injustices

3.3 Method for Analysis

To address the first research question, 1) – *What are the provisions of Colorado’s just transition policy* the Just Transition Action Plan (JTAP) will be the primary data used. Using the JTAP, there will be qualitative coding utilizing the proposed code book to identify what provisions are arising across Colorado’s just transition and how are these provisions reflected in terms of the outlined pillars of transition. The provisions will be coded with potentially only one pillar or with multiple. The pillar codes are Governmental Support (short-term), Governmental Support (long-term), Dedicated Funding Streams (short-term), Dedicated Funding Streams (long-term), Economic Diversification (short-term), Economic Diversification (long-term), Social Justice, and Environmental Justice. For example, if there is a provision for a commitment by the State of Colorado to increase the staff capacity of the Office of Just Transition to be five full-time employees by 2024, this provision would be coded as Governmental Support (short-term). This provision would then show that in the JTAP, there is support within the provisions for the pillar of Governmental Support (short-term). Support for each pillar is defined by either being weak, moderate, or strong. Weak support is when there is a lack of action in terms of

policies and programs across the provisions and/or implementation. This means there are little to no policies and programs that are coded as a pillar. For example, if there are little to no provisions or aspects of implementation that address aspects of the pillar of Governmental Support (short-term), then there would be weak support for this pillar. Moderate support for a pillar is seen when there is many instances of action in the provisions and/or implementation through multiple policies and programs. Strong support for a pillar is seen when there are extensive actions across the provisions and/or implementation through a variety of differing policies and programs that are seeking to address multiple aspects of the transition.

To address the second research question, questions 2) *Does implementation weaken, reproduce, or strengthen the outlined provisions?*, the data used will be all primary sources following adoption of Colorado's Just Transition Action Plan (JTAP). This includes Just Transition Action Committee (JTAC) meetings along with supporting meeting packet documents and documents produced by the Office of Just Transition and Colorado Department of Health and Environment (CDPHE). Meeting packet documents were distributed directly from one of the full-time staff members of the Office of Just Transition via an email list. Along with distribution directly from a staff member, these documents can be located through a public access google drive (The Office of Just Transition 2023). This Google drive houses all JTAC meeting packet documents and recordings for meetings from 2021-2023. Along with these primary sources, there will be the usage of secondary documentation from reports and local news to help address this question.

Through program evaluation, it will be uncovered how implementation is fairing in relation to the chosen analytical scheme and if implementation is weakening, reproducing, or strengthening the outlined provisions of the just transition policy. Like in the qualitative coding

to answer the first research question, the documentation used for the implementation of the transition will be coded. These documents will be coded with the pillars of transition: Governmental Support (short-term), Governmental Support (long-term), Dedicated Funding Streams (short-term), Dedicated Funding Streams (long-term), Economic Diversification (short-term), Economic Diversification (long-term), Social Justice, and Environmental Justice. Specific examples from these documents will be coded along with the overall intention for the document. Like the provisions, examples derived from implementation can be coded with one or multiple of the pillars. These pillars will then be defined as being either weak, moderate, or strong. Pillars that are defined as being weak during implementation are weakening the provisions of the transition. Pillars defined as moderate during implementation are ones that are reproducing the outlined provisions for the transition. Lastly, pillars that are defined as strong are ones that are strengthening the outlined provisions of the transition. With these definitions, it can be clearly seen whether each pillar is being weakened, reproducing, or strengthening the transition.

CHAPTER FOUR: THE PROVISIONS OF COLORADO’S JUST TRANSITION POLICY

This chapter outlines how the Just Transition Action Plan (JTAP) was developed, who the JTAP covers, the overarching structure of the JTAP, why this structure is important to understanding Colorado’s just transition, and lastly, this chapter discusses the findings to the first research question 1) – *What are the provisions of Colorado’s just transition policy?*

4.1 Colorado’s Just Transition Action Plan (JTAP)

The Just Transition Action Plan plays a key role in understanding the provisions for Colorado because it creates the provisions for the transition by outlining specific goals, strategies, and actions. The JTAP operationalizes the original goals and intentions of HB19-1314 “Just Transition From Coal-Based Electrical Energy Economy,” which were to create a “strong and comprehensive policy” so that coal communities can grow their economies in “sustainable and equitable” ways along with ensuring that “the clean energy economy fulfills a moral commitment to assist the workers and communities that have powered Colorado for generations, as well as disproportionately impacted communities who have borne the costs of coal power pollution for decades” through a just and inclusive transition (Colorado General Assembly 2019).

The JTAP was drafted during 2020 by the Just Transition Advisory Committee (JTAC). To align the visions and objectives of members of the JTAC during the drafting stage, subcommittees were created. These subcommittees were the Financing Subcommittee, Workers Subcommittee, and Economy & Community Development Subcommittee. Over the course of 2020, these subcommittees drafted work plans that were used by the Keystone Policy Center to assist in creating finalized work plans, timelines to guide the work, and benchmarks to meet. The

draft work plans included answering questions such as the vision for each subcommittee, the top three focus areas for each subcommittee, the main objectives for the subcommittee, what data or information is needed to achieve objectives, who should the subcommittee hear from to meet outlined objectives, which sections of the draft report as outlined in HB19-1314 “Just Transition from Coal-based Electrical Energy Economy” directly relate to the subcommittee’s work, what information would the subcommittee like to gather from communities through the community engagement meetings, and specific deliverables the subcommittee wanted to accomplish by May 31, 2020. These workplans were then used to help create the structure of the JTAP along with creating the specific goals, strategies, and actions. While the original intention of this research was not to analyze the formulation of the JTAP, it is worthwhile to note that these subcommittees only address the pillars of Dedicated Funding Streams and Economic Diversification. There is a large absence of Governmental Support and Justice whether it is social or environmental justice.

The adopted plan specifically discusses and focuses on covering coal transition communities and coal transition workers. Coal transition communities have been specifically outlined in the original legislation to mean a “municipality, county, or region that has been affected in the previous twelve months, or that demonstrates it will be impacted in the next thirty-six months, by the loss of fifty or more jobs in total from a coal mine, coal-fueled electrical power generating plant, or the manufacturing and transportation supply chains of ” (Colorado General Assembly 2019). Also, coal transition workers were defined in the original legislation to mean “a Colorado worker laid off from employment on or after the effective date of this section in a coal mine, coal-fueled electrical power generating plant, or the manufacturing and transportation supply chains of ” (Colorado General Assembly 2019). A last group identified

and defined by the original legislation is disproportionately impacted communities (DICs), which were defined as “any community of color, low-to-middle income community, or indigenous community that is or has been directly impacted by coal pollution” (Colorado General Assembly 2019). Although DICs are specifically highlighted by the original legislation, they are not the focus of the JTAP. Further discussion on the lack of coverage of DICs in the JTAP will be expanded upon later when discussing the justice aspects of the transition.

The JTAP is led by the overarching goal with supporting subgoals. The overarching goal, as seen in Table 2, is to “specifically, through a just transition, [the Just Transition Advisory Committee intends to] help each [coal transition] community end up with more family-sustaining jobs, a broader property tax base, and measurably more economic diversity than when [the transition] process began in 2019 (“Colorado Just Transition Action Plan” 2020). To support this goal, there are three sections of the plan, one focused on coal transition communities, another on coal transition workers, and lastly a section focused specifically on funding for the transition. These sections of the plan align with the subcommittees that were used to help draft the plan. Again, like the formulation of the JTAP, there is a large absence of the pillars of Governmental Support and Justice within the overall outline and structure of the plan.

Table 2: The Overarching Goal of Colorado’s Just Transition Action Plan

Overarching Goal of JTAP	The overarching goal for the JTAP is to “avert yet another boom-bust cycle in Colorado by helping coal communities and workers transition to prosperous futures. Specifically, through a just transition we intend to help each community end up with more family-sustaining jobs, a broader property tax base, and measurably more economic diversity than when this process began in 2019.”
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Looking at the outline sections of the JTAP more closely, the first section of the Just Transition Action Plan is specifically designated for helping coal communities transition to prosperous futures. In this, the general aim is to create “more good jobs, more diverse economies, and broader property tax bases” ("Colorado Just Transition Action Plan" 2020). There are 11 Colorado counties that are potential coal transition communities. The action plan has identified six community strategies to help address the challenges faced by these communities. These strategies, outlined in Table 3, are as follows: aligning state and federal programs to assist local strategies, targeting early successes in business start-ups, expansions, retention, and attraction, empowering communities with resources to drive their own economic transitions, coordinating infrastructure investments to support local and regional transition strategies, identifying and supporting state, regional, and local institutions to facilitate needed investments, and attracting grant and investments to power local economic growth ("Colorado Just Transition Action Plan" 2020).

Table 3: Colorado Just Transition Action Plan Strategies for “Helping Coal Communities Transition to Prosperous Futures”

Strategies for “Helping Coal Communities Transition to Prosperous Futures”	Description
<i>Community Strategy 1</i>	Align state and federal programs to assist local strategies
<i>Community Strategy 2</i>	Target early successes in business start-ups, expansions, retention, and attraction
<i>Community Strategy 3</i>	Empower communities with resources to drive their own economic transitions
<i>Community Strategy 4</i>	Coordinate infrastructure investments to support local and regional transition strategies
<i>Community Strategy 5</i>	Identify and support state, regional, and local institutions to facilitate needed investments
<i>Community Strategy 6</i>	Attract grants and investments to power local economic growth

The second main section of the Just Transition Action Plan looks at protecting the economic security of coal workers and their families or simply for people to have “good new jobs and secure retirement” (“Colorado Just Transition Action Plan” 2020). There are about 2,000 to 3,000 Coloradans that will face challenges as a coal transition worker with a total of over 90 workers already having lost their jobs when coal mines and power plants closing (“Colorado Just Transition Action Plan” 2020). To address the challenges that coal transition workers will face,

the Just Transition Action Plan outlines four worker strategies. These strategies are to empower workers and their families to plan early for success, encourage the federal government to lead with a national strategy for energy transition workers, prepare for future consideration, create a detailed state program to help displaced workers build skills, find good jobs, or start businesses, and to explore strategies to protect family economic security through the transition. These strategies, detailed in Table 4, are supported by action steps to help achieve the strategy.

Table 4: Colorado Just Transition Action Plan Strategies for “Protecting the Economic Security of Coal Workers and Their Families”

Strategies for “Protecting the Economic Security of Coal Workers and Their Families”	Description
<i>Worker Strategy 1</i>	Empower workers and their families to plan early for future success
<i>Worker Strategy 2</i>	Encourage the federal government to lead with a national strategy for energy transition workers
<i>Worker Strategy 3</i>	Prepare, for future consideration, a detailed state program to help displaced workers build skills, find good jobs, or start businesses.
<i>Worker Strategy 4</i>	Explore strategies to protect family economic security through the transition.

The final portion of the Just Transition Plan looks at funding resources to support the transition. This portion of the plan acknowledges that funding sources need to be continuously identified because within existing funding resources, it is not likely that all goals, strategies, and actions will be achieved. It is acknowledged that the state must maximize investment and financial support for the plan to achieve its goals. The funding strategies identified are as follows: to develop realistic options for further State support of just transition strategies, work with utilities and mining companies to increase transition funding, and to ensure the OJT has adequate capacity to continue to develop and implement the Action Plan. These strategies are outlined in the following table (Table 5).

Table 5: Colorado Just Transition Action Plan Strategies for “Finding Resources to Support the Transition”

Strategies for “Finding Resources to Support the Transition”	Description
<i>Funding Strategy 1</i>	Develop realistic options for further State support of just transition strategies
<i>Funding Strategy 2</i>	Work with utilities and mining companies to increase transition funding
<i>Funding Strategy 3</i>	Ensure the OJT has adequate capacity to continue to develop and implement this Action Plan.

4.2 Overarching Goals of the Just Transition Action Plan

As stated previously, the Just Transition Action Plan (JTAP) provides an important outline of the provisions for Colorado's transition. This plan outlines what the main goals are along with strategies and actions to achieve the provisions. Using the JTAP, I will answer the first part of the research question 1) – *What are the provisions of Colorado's just transition policy?* To better understand these provisions, the previously identified analytical scheme will be used to analyze the JTAP. This analytical scheme consists of four main pillars, with these pillars being separate into short- and long- term. These pillars are: Governmental Support (from Short-term to Long-term), Dedicated Funding Streams (from Short-term to Long-term), Economic Diversification (from Short-term to Long term), Justice – Social Justice, and Justice – Environmental Justice.

The overarching goal for Colorado's transition is “to avert yet another boom-bust cycle in Colorado by helping coal communities transition to prosperous futures” ("Colorado Just Transition Action Plan" 2020). In this goal, there is a focus on long term Economic Diversification, Dedicated Funding Streams (Long-Term), and Social Justice. Avoiding a boom-bust cycle for Colorado means there will need to be a commitment to economic diversification to create a community no longer reliant on a singular industry. To achieve prosperous futures, dedicated funding will be crucial due to long-term worker and community needs. Justice, specifically a focus on social justice, is crucial to achieve the “just” aspect of this just transition, as outlined in the goal.

The sub-goals outlined in the JTAP are divided into supporting coal communities, coal workers, and finding sustainable funding for the transition. For coal communities the goal is to “help each community end up with more family-sustaining jobs, a broader property tax base, and

measurably more economic diversity than when this process began in 2019” (“Colorado Just Transition Action Plan” 2020). This sub-goal looks at Economic Diversification (Short- and Long- term), Dedicated Funding Streams (Short- and Long- term), and Justice - Social Justice. For the workers, the goal is for the transition “to help workers who are laid off from the coal industry or related businesses secure good new jobs with family-sustaining incomes—and to help them do so without sacrificing their families’ economic security. This includes achieving secure retirements for older workers who may not wish to stay in the workforce” (“Colorado Just Transition Action Plan” 2020). This goal encompasses Economic Diversification (Short- and Long- term), Dedicated Funding Streams (Long), and Justice - Social Justice. The Just Transition Advisory Committee has acknowledged that there will be “significant costs” to achieving the outlined strategies so the final goal of the plan is to “identify potential funding options from public, non-profit, and private sources should the State decide to move forward with any of these recommendations. This includes ways to help communities bridge gaps in property tax revenues and to pay for new programs to serve displaced workers” (“Colorado Just Transition Action Plan” 2020). This goal includes a focus on Dedicated Funding Streams (Short- and Long- term).

4.3 Key Provisions of the Just Transition Action Plan

The goals, strategies, and actions across the Just Transition Action Plan show a range from weak to strong support of the key pillars of just transition. The pillars of Governmental Support (Short-term) and Dedicated Funding Streams (Short-term) have strong support. The key pillars of Governmental Support (Long-term), Economic Diversification (Short-term), and Justice – Social Justice have moderate support. Lastly, the key pillars of Dedicated Funding Streams (Long-term), Economic Diversification (Long-term), and Justice – Environmental

Justice have weak support. It is important to analyze these themes in the context of Colorado's just transition, to better understand this transition.

Table 6: How Colorado's Just Transition Fits Within the Key Pillars for Just Transitions

Pillar	Short-Term	Long-Term
Governmental Support	<p>Strong</p> <ul style="list-style-type: none"> -Creation of OJT -Plans for relationships between state agencies (CDLE, DOLA, OEDIT) -Increase staff capacity and resources 	<p>Moderate</p> <ul style="list-style-type: none"> -Long term commitments by State unclear -Collaboration between state agencies not guaranteed -Lack of concrete goals for Federal government involvement
Dedicated Funding Streams	<p>Strong</p> <ul style="list-style-type: none"> -Many short-term goals easily achieved with current funding -Extensive plans to increase funding 	<p>Weak</p> <ul style="list-style-type: none"> -Needs 'buy-in' from Federal government and utilities, not clear how the OJT and State will achieve this -Long-term funding sources not clear or solidified
Economic Diversification	<p>Moderate</p> <ul style="list-style-type: none"> -Require further collaboration between State, communities, and investors to achieve goals 	<p>Weak</p> <ul style="list-style-type: none"> -Lack of specific goals other than a desire for broad economic

	<i>-Need funding that has yet to be secured</i>	<i>diversification & to replace infrastructure and lost tax bases</i> <i>-Need funding that has yet to be secured</i>
	Social Justice	Environmental Justice
Justice	Moderate <i>-Not extremely specific on intended goals for social justice</i> <i>-Need funding that has yet to be secured</i>	Weak <i>-No plans to address environmental justice</i> <i>-Not included within specific strategies, goals, or actions</i>

4.3.1 Governmental Support

Although governmental support was not identified in the overarching goal or subgoals of the JTAP, it arises in nine different strategies, five being community strategies, one worker strategy, and three funding strategies. Throughout the plan there is strong short-term governmental support due to commitments by the State such as the creation of the OJT and to increase capacity and resources towards the transition. In the plan, there were also commitments to active and ongoing relationships between State agencies such as Colorado Office of Economic Development and International Trade (OEDIT), Colorado Department of Local Affairs (DOLA), Colorado Department of Labor and Employment (CDLE), the Governor's Office, and local communities. These efforts are easy to achieve within current resources, making them easier to accomplish but this still shows commitment by the State to coordinate the transition. Along with

short-term governmental support, there has been moderate long-term governmental support for the transition. Although there have been commitments by the State to create entities such as the OJT and for State agencies to coordinate with each other and local communities, many long-term goals, actions, and strategies do not have long-term dedicated capacity and resources to be achievable. It is not clear yet if the State is envisioning a larger ‘all government’ approach to achieving the outlined transition. There is certainly a lot of plans to involve many state agencies and other collaborators, but it seems there is yet to be a full commitment by the State within the outlined plans.

As noted by the Just Transition Advisory Committee, negative implications from the transitions such as the one in Colorado can be perpetuated “due in part to inadequate (or nonexistent) government response” (“Colorado Just Transition Action Plan” 2020). To achieve the goals of the JTAP, governmental support is necessary. The JTAP emphasizes the importance of not only State support but aligning of State and Federal programs through coordination to ensure a successful transition. For instance, in achieving economic diversification and development, the State and Federal Government have a wide range of programs, incentives, and other tools to assist (“Colorado Just Transition Action Plan” 2020). These programs, incentives, and tools “are most effective when they are coordinated and often stacked upon one another” (“Colorado Just Transition Action Plan” 2020). To best utilize available tools and resources, it will take coordination and strong governmental support. To help assist, Governor Jared Polis “has directed state agencies to make assisting coal transition communities a priority” (“Colorado Just Transition Action Plan” 2020). Throughout the JTAP, a variety of state agencies such as DOLA, CDLE, and OEDIT are mentioned as key partners to the OJT’s work on implementing the JTAP. Partners within these offices will help make up the State Action Teams that are

established by the OJT with the aim to work with each Tier One community or region to coordinate and align existing state programs, funding, and infrastructure investments to support transition plans" ("Colorado Just Transition Action Plan" 2020). These teams are critical to providing governmental support and will help with critical guidance and expertise on relevant fields such as financing, grant opportunities, business recruitment and site selection, business expansion, and more ("Colorado Just Transition Action Plan" 2020). Not only will coordination across state agencies be important for the transition in Colorado, but these state agencies seek to coordinate efforts to get the Federal Government to establish and fund energy transitions for workers and communities' nationwide.

4.3.2 Dedicated Funding Streams

Throughout the JTAP, there is a large emphasis on the need for funding. Funding is clearly a key pillar to the provisions of the JTAP because it is seen across every goal, subgoal, and throughout eleven strategies, six being community strategies, two being worker strategies, and three being funding strategies. Based on the plan in its current form there are many short-term dedicated funding streams for the transition, providing evidence of strong support for short-term dedicated funding. Many of the goals, strategies, and actions in the JTAP are achievable with current funding streams or with minor increases in funding. Also, since the finalization of the JTAP, there has been more funding designated for the transition. This will be expanded on in the next chapter.

Although there are strong short-term dedicated funding streams, there are weak long-term dedicated funding streams for the transition. Many of the goals, strategies, and actions that require long-term funding do not have identified funding streams or strategies therefore making

them unachievable until long-term funding is found. This concern about long-term dedicated funding streams was recognized on multiple occasions throughout the JTAP.

Being able to address funding needs is one of the main concerns of a just transition. In the case of Colorado, funding currently allocated will not be enough to address all the goals outlined within the Just Transition Action Plan. Although, “most of the early actions outlined in [the] plan can be achieved within existing resources -- or with very modest increases in state funding or support from other stakeholders... There are a wide range of potential sources of funding for these early actions -- even some of the more costly ones” (“Colorado Just Transition Action Plan” 2020). Even though many goals can be funded within current resources, the largest goals do not have funding identified. These include addressing expansion of infrastructure, helping communities bridge the gap created by lost property tax revenue, and wage differential and wage replacement benefits (“Colorado Just Transition Action Plan” 2020).

Some of the potential actions for funding have been to utilize the State Action Teams to “navigate and maximize benefits available” such as the “CLIMBER Fund, Energize Colorado Gap Fund, EDA Statewide Revolving Loan Fund, CDBG Regional revolving loan funds, credit enhancement programs run by CHFA on behalf of OEDIT, Community Development Financial Institutions (CDFIs), and other non-profit lenders and traditional banking and capital resources” (Just Transition Advisory Committee 2020). There are also thoughts to fund strategies by expanding awareness and participation in “business support incentives such as the Rural Jump Start, Procurement Technical Assistance Center (PTAC), Venture Capital Authority (VCA)/Greater Colorado Venture Fund, Enterprise Zone and Enhanced Rural Enterprise Zone Tax Credits (EREZ), Job Growth Incentive Tax Credits (JGITC), Strategic Fund cash job growth incentives, Advanced Industries grants and incentives, Skill Advance Colorado job training

dollars, and Minority Business contractor certifications” (“Colorado Just Transition Action Plan” 2020). The JTAP also outlines plans for the OJT to work with other state agencies such as the Colorado Energy Office, OEDIT, DOLA, the Governor’s Office, and the Treasurer’s Office to leverage other available funding opportunities not specifically designated for the OJT.

As mentioned previously, the original legislation HB19-1314 “Just Transition from Coal-based Electrical Energy Economy,” appropriated \$155,758 from the General Fund to the Department of Labor and Employment and \$920 from the General Fund to the General Assembly for implementation (Colorado General Assembly 2019). At the time of the writing and approval of the JTAP in 2020, no further funding had been passed. It was assumed that funding in HB19-1314 “Just Transition from Coal-based Electrical Energy Economy” would not be enough for the implementation of Colorado’s just transition. The next chapter will further discuss the additional funding that has since been passed by the legislature and signed into law that is being utilized for the implementation of the JTAP.

Dedicated funding streams continue to be a concern for achieving the outlined provisions in the JTAP. Dennis Dougherty, executive director of the Colorado AFL-CIO and co-chair of the just transition advisory committee, has said that he expects “about \$100 million a year will be needed as the coal plant closures accelerate in around 2025 and 2026” (Best 2021). In later sections, it will be discussed what work has been done to address concerns of funding, but funding has still not reached the estimated amount of \$100 million a year. Dougherty hopes the federal government can provide some funding to “shoulder the burden of the transition from coal to other fuel sources,” there are still other potential directions that can be taken by the state to attract more funding (Best 2021). Currently, the JTAP has identified three main funding strategies to help fund the just transition. It is expected that the obligation to support Colorado

coal communities “will be shared among public and private actors at the local, state, and national levels” (“Colorado Just Transition Action Plan” 2020). The current funding strategies are to develop realistic options to support the State’s just transition strategies, work with utilities and mining companies on increasing transition funding and ensuring the Office of Just Transition will have continued capacity through investment and funding to continue (“Colorado Just Transition Action Plan” 2020). It has been noted that financing the just transition will be difficult during times of “significant economic uncertainty and fiscal constraints” that have been exacerbated by the COVID-19 pandemic (“Colorado Just Transition Action Plan” 2020).

To address funding concerns, there have been a variety of strategies brought to the forefront. A plausible funding strategy is for the OJT and other state agencies to work with utilities and mining companies to share “some of the obligation for funding community and worker transitions” through additional mechanism such as “securitization” which was authorized through SB 19-236 (“Colorado Just Transition Action Plan” 2020). Mentions of using “securitization” for funding appear through the JTAP in a variety of places. Coal securitization is a method that can be used to help finance portions of Colorado’s just transition such as the closure of coal-fired power plants and the support needed for workers and communities. Securitization or a securitized bond is a financial tool, that can be understood as similar to refinancing a mortgage (Fong and Mardell 2021). As part of SB19-236 “Colorado Energy Impact Bond Act,” the Colorado Public Utilities Commission (COPUC) was reauthorized to “act on, and report on regulatory, incentive, and market reforms that support clean energy goals contained in legislation” (Lehr and O’Boyle 2020). This legislation authorized securitization for early retired power plants as a purpose for issuing bonds along with assistance for affected workers and communities as approved by the commission (Lehr and O’Boyle 2020). Bonds issued will be

guaranteed by the state's legislative and regulatory power to set rates and conditions for those bonds (Lehr and O'Boyle 2020). Securitization aims to create a win-win situation for ratepayers, the utilities, and the affected workers and communities. Ratepayers can achieve lower rates; utilities can close coal-fired power plants without a huge burden of cost and affected workers and communities can have some financing to help them through a transition.

Lastly, something that is not mentioned in the JTAP but is relevant to funding and unique to Colorado, is that Colorado runs into a problem with acquiring funding due to The Taxpayer's Bill of Rights (TABOR) Amendment. This amendment, approved in 1992, "limits the amount of revenue the State of Colorado can retain and spend" based on the prior fiscal year's actual revenue or limit (Colorado General Assembly 2022). Any revenue changes, such as tax increases, must be voter-approved (Colorado General Assembly 2022). The main impact that TABOR would have on the transition is that there are very limited pathways to achieving the needed funds to have a successful transition. Any increase to the revenue of the state that might be aimed at funding the transition would need voter approval. Historically, TABOR has been a factor that constrains state revenue from taxes and fees (Colorado General Assembly 2022).

4.3.3 Economic Diversification

Throughout the JTAP, Colorado's transition is largely focused on creating economic diversification by "helping coal communities transition to prosperous futures [that include] more good jobs, more diverse economies, broader property tax bases" ("Colorado Just Transition Action Plan" 2020). Across the plan, the pillar of economic diversification shows up in nine different strategies, six being community strategies and three being worker strategies. Although there is an overarching goal for economic diversification and it shows up in a variety of strategies, but there is only moderate commitment for short-term economic diversification within

the JTAP. Many of the goals, strategies, and actions in the plan require further collaboration between the State, local communities, and investors before they can be addressed even though they are discussed often throughout the plan. Also, achieving many of the goals, strategies, and actions for economic diversification are reliant on dedicated funding streams. In the case of long-term economic diversification, there is weak commitment. There is a lack of goals, strategies, and actions in the plan on how to create long-term economic diversification due to the need for further collaboration between the State, local communities, and investors. Also, most long-term economic diversification needs are reliant on having strong long-term dedicated funding streams that have yet to be identified and secured.

The JTAP outlined a variety of methods for addressing economic diversification such as using “available tools to create a strong environment for job creation through business retention, expansion and attraction” along with utilizing “state action teams [to] assist with developing rural economic diversification and transition roadmaps” (“Colorado Just Transition Action Plan” 2020). Many of the available tools for addressing economic diversification are expanding awareness to a variety of business support incentives such as the Rural Jump Start, Procurement Technical Assistance Center (PTAC), Venture Capital Authority (VCA)/Greater Colorado Venture Fund, Enterprise Zone and Enhanced Rural Enterprise Zone Tax Credits (EREZ), Job Growth Incentive Tax Credits (JGITC), Strategic Fund cash job growth incentives, Advanced Industries grants and incentives, Skill Advance Colorado job training dollars, and Minority Business contractor certifications (“Colorado Just Transition Action Plan” 2020). Also, through State Action Teams, there is the intention for the state to assist in a variety of actions such as local educational and resource forums, developing strategies to attract new business to transition communities, expansion of free consulting classes and technical assistance opportunities, and

expanding remote work opportunities ("Colorado Just Transition Action Plan" 2020). Many of these actions for addressing economic diversification rely on the Office of Just Transition (OJT) to coordination with a variety of state agencies such as the Department of Local Affairs (DOLA), Colorado Office of Economic Development and International Trade (OEDIT), and Colorado Department of Labor and Employment (CDLE).

Alongside actions focused on job creation, the plan also designates that economic diversification should consider implications regarding the property tax gap that will occur from the transition. This is the largest concern when thinking about long-term economic diversification. Coal facilities have become intertwined with the wellbeing of communities. The state's coal-fired power plants and mines pay property taxes to a variety of jurisdictions such as fire protection districts, school districts, water districts, municipalities, and other key jurisdictions that provide important social services to these communities ("Colorado Just Transition Action Plan" 2020). In 2019, coal facilities paid "\$65 million in property taxes to over 95 separate jurisdictions" and when these coal facilities close, these jurisdictions lose these property taxes. It has been estimated that to recoup these losses, "at the average total mill levy rate in Colorado (81.7), it would take nearly \$2.75 billion in new commercial property value to generate \$65 million in annual property taxes. At the average total mill levy rate in Tier One transition communities (70.19), it would take nearly \$3.2 billion in new commercial property value to generate \$65 million in annual property taxes" (Just Transition Advisory Committee 2020). This "property tax gap" will continue to "persist until new economic growth generates enough new property value to permanently replace what is lost in these communities when coal facilities close" ("Colorado Just Transition Action Plan" 2020). It has been noted in the plan that "rebuilding [the] tax base [for transition communities] will be one of the central measures of

success for Colorado’s just transition efforts in coal-transition communities” ("Colorado Just Transition Action Plan" 2020). Although the property tax gap has been identified as a central measure to success of Colorado’s transition, the plan also noted that the property tax gap is one of the “big-ticket” items that has not had the identification of appropriate or adequate sources of immediate funding ("Colorado Just Transition Action Plan" 2020). The OJT plans to continue working with economists at CDLE and issue experts to try to identify the actual amount of revenues that will be loss to taxing districts during the transition which will help inform further economic diversification strategies.

4.3.4 Justice – Social Justice

Like Economic Diversification, Social Justice, is a key theme to arise from the overarching goal and subgoals, along with the strategies and actions of the JTAP. Justice – Social Justice can be seen across the overarching goal, two of the subgoals, and six different strategies, one being a community strategy and four being worker strategies. With this, across the plan there is moderate commitment to Justice – Social Justice. While many considerations for social justice have been identified in the goals, strategies, and actions, achieving many of the identified social justice ambitions requires strong long-term dedicated funding streams that have yet to be identified.

A key aspect of a just transition is that it is inherently just, meaning there must be a focus on social justice for this to be a true just transition. As noted in the JTAP, transitions like the one away from coal “have happened in rural Colorado throughout [the] state’s history, and... they too often have perpetuated boom-bust cycles that have devastated families and communities” ("Colorado Just Transition Action Plan" 2020). Due to these boom-bust cycles that have been perpetuated by inadequate support, the plan overall seeks to help “coal communities and workers

transition to prosperous futures” (“Colorado Just Transition Action Plan” 2020). Stated in the JTAP, “[the Just Transition Advisory Committee] believe it is a fundamental obligation of [the] government to address [any] threat[s] [to] the health and safety of [Colorado] citizens and [specifically] those that arise more predictably from fundamental shifts in [the] economy over time” (“Colorado Just Transition Action Plan” 2020). In 2019, “the Colorado General Assembly made a “moral commitment to assist the workers and communities that have powered Colorado for generations” by supporting “a just and inclusive transition” away from coal” (“Colorado Just Transition Action Plan” 2020). This “moral commitment” is a clear sign of the focus for social justice within the transition. Through this transition, the state of Colorado and others “intend to help each community” (“Colorado Just Transition Action Plan” 2020). Some ways the JTAP hopes to address this “moral commitment” is through utilizing existing mechanisms to support investments that will “lead to jobs that provide family-sustaining incomes, meet appropriate labor standards, and share community benefits equitably” (“Colorado Just Transition Action Plan” 2020). Along with using existing mechanisms, the JTAP plans to empower workers and families through early engagement by working with the CDLE to develop outreach strategies and workforce toolkits, planning for future fiscal considerations and needs, and working to encourage the Federal government and utilities to share the cost of this transition (“Colorado Just Transition Action Plan” 2020).

It is important to note that the discussed “communities” in the JTAP are the “coal transition communities” which have been defined as “a municipality, county, or region” that has been or will be affected “by the loss of fifty or more jobs in total from a coal mine, coal-fueled electrical power generating plant, or the manufacturing and transportation supply chains of” (“Colorado Just Transition Action Plan” 2020). Through this definition, all, or part of 11

Colorado counties are transition counties with some being identified as Tier One Transition Communities (Moffat, Rio Blanco, Routt, Morgan, and Pueblo counties) which will see the most “meaningful declines in economic activity, their employment base, and property tax revenues before 2030” (“Colorado Just Transition Action Plan” 2020). The other communities, or Tier Two Transition Communities (Delta, El Paso, Gunnison, La Plata, and Larimer counties) will “experience much milder effects (if any), at least for the foreseeable future” (“Colorado Just Transition Action Plan” 2020). This definition of coal communities does not include Disproportionately Impacted Communities (DICs), which are separately defined in the original legislation as “any community of color, low-to-middle income community, or indigenous community that is or has been directly impacted by coal pollution” (Colorado General Assembly 2019). Although DICs are specifically highlighted by the original legislation, they are not addressed within any of the goals, actions and strategies that address Justice – Social Justice. This is a glaring gap for the JTAP as the transition will not only affect coal transition communities, but also DICs that might be overlooked. The Just Transition Action Committee has recognized this as a gap, and this will be discussed later in the next chapter.

Although DICs are overlooked in the provisions of the JTAP, the designation of different communities to Tier One and Tier Two is important to addressing social justice. This is because Tier One communities will experience more significant consequences and thus will require more attention and resources from the Office of Just Transition. The JTAP also acknowledges that the transition from coal is not just a Colorado phenomenon, but coal mined in the United States “crosses at least one state border before it is consumers, and some leaves the country entirely” (“Colorado Just Transition Action Plan” 2020). The transition from coal in Colorado will see affects not only on those in the coal industry in Colorado, but in other states. This concern leads

to the acknowledgement by the JTAC that eventually there will need to be a “unified national approach” to address consequences beyond those in Colorado ("Colorado Just Transition Action Plan" 2020). In the meantime, to address concerns of social justice in the state of Colorado, it is important to identify communities and people that are disproportionately impacted by the transition so resources and plans can best support these communities and people.

4.3.5 Justice – Environmental Justice

Unlike other themes, Justice – Environmental Justice was absent from most of the JTAP. It did not appear in any of the goals, subgoals, strategies, or actions. The only section where this pillar appeared was in separate acknowledgement sections outside of the goals, strategies, and actions. These acknowledgement sections being “Planning for a Just Transition in the time of COVID” and “An Ongoing Commitment to Disproportionately Impacted Communities” (Just Transition Advisory Committee 2020). Due to this, there is very weak commitment Justice – Environmental Justice provisions in the JTAP.

While not specifically mentioned as environmental justice, the JTAC believes in the “fundamental obligation of [the] government to address both kinds of challenges [that] urgently threaten the health and safety of [Colorado] citizens ("Colorado Just Transition Action Plan" 2020). Within the Principles of Environmental Justice, environmental justice includes any combination of the need for environmental policy that explicitly requires equity, the necessity for communities currently affected by the pollution of fossil fuel industries to be involved at the outset in planning the transition to avoid problems and maximize the solutions, and the need for a holistic approach in designing the transition to a cleaner economy. This fundamental obligation identified by the JTAC falls under the necessity to assist communities during transition due to the threats on their health and safety.

As mentioned previously, there has been the explicit reference of a “moral commitment” to coal transition communities and workers in the original legislation ("Colorado Just Transition Action Plan" 2020). Along with a “moral commitment” to these groups, the legislation mentioned a moral commitment to “the disproportionately impacted communities who have borne the costs of coal power pollution for decades” ("Colorado Just Transition Action Plan" 2020). Although DICs are specifically highlighted by the original legislation, they are not the focus of the JTAP. As mentioned in this acknowledgement, HB19-1314 “Just Transition from Coal-based Electrical Energy Economy” provides “no further guidance to either the JTAC or the OJT on how specifically to address issues facing disproportionately impacted communities” ("Colorado Just Transition Action Plan" 2020). Although no further guidance is given, the JTAC agrees that the Legislature clearly intended for the JTAC and OJT “to keep a close eye on issues of environmental justice” ("Colorado Just Transition Action Plan" 2020).

The JTAC clearly believes that environmental justice should be best addressed in the “broader context” by the OJT engaging with interagency efforts – largely led by the Colorado Department of Public Health and Environment (CDPHE), to address environmental justice issues ("Colorado Just Transition Action Plan" 2020). These efforts by CDPHE are largely supported by the passage of HB21-1266 “Environmental Justice Disproportionate Impacted Community.” Although this legislation was passed and signed into law following the approval of the JTAP, it is still largely guiding the state level work on environmental justice. HB21-1266 concerns efforts to “redress the effects of environmental injustice on disproportionately impacted communities” (Colorado General Assembly 2021). Some important components of this legislation in the context of Colorado’s just transition is the defining of disproportionately impacted communities (DICs), creating an environmental justice action task force in the CDPHE, and requiring the OJT

to develop long-term budget to adequately finance the just transition plan relating to the closure of coal-fired power plants (Colorado General Assembly 2021). In this legislation DICs were defined as “a community that is in a census block group where the proportion of households that are low income, that identify as minority, or that are housing cost-burdened is greater than 40%; or any other community as identified or approved by a state agency, if the community: has a history of environmental racism perpetuated through redlining, anti-Indigenous, anti-immigrant, anti-Hispanic, or anti-Black laws; or is one where multiple factors may act cumulatively to affect health and the environment and contribute to persistent disparities” (“Colorado Just Transition Action Plan” 2020). The Environmental Justice Action Task Force created through this legislation was tasked to create recommendations for the legislature, governor’s office, and CDPHE for environmental justice. These finalized recommendations called for the legislature to “evaluate additional opportunities for the just transition of workers and communities, [including those in the oil and gas industry], that agencies should implement the existing Just Transition Action Plan,” and for the legislature to adequately fund Colorado’s Just Transition Action Plan “as it exists now to maintain and increase funds for communities and workers currently undergoing the transition away from coal for economic development, workforce development, public benefits, capacity building, and infrastructure” (“Colorado Environmental Justice Action Task Force Final Report of Recommendations” 2022). Although environmental justice is not a key component of the JTAP, these actions in the broader context of environmental justice by state agencies show that there are efforts for environmental justice to be addressed. It will be important to see how these interagency efforts transpire into addressing environmental justice during Colorado’s transition.

4.4 Achieving the Provisions of the JTAP

Many lessons can be learned from analyzing the provisions of the Just Transition Action Plan (JTAP). As seen throughout the JTAP, economic diversification, dedicated funding, and social justice will play key roles during implementation. With the roles of economic diversification, funding, and social justice, these provisions aligned with these pillars are clear to be the main concerns for the policy. Also, it is important to note that funding will be one of the most important aspects, if not the most important aspect for achieving the provisions of the policy. Without funding, outlined provisions in the JTAP will not be achieved because all the pillars depend on the pillar of Dedicated Funding Streams. Without short- and long-term funding, the state will not be able to achieve the goals outlined in the JTAP. While additional funding has been secured since the adoption of the plan, ongoing funding is still needed, and the legislature has yet to fully fund the transition.

Along with a focus on funding, Colorado's transition is largely focused on economic diversification and social justice. But it should be noted that any plans for economic diversification are heavily reliant on funding, so it is not guaranteed that the implementation can achieve the goals outlined for economic diversification. This greatly weakens economic diversification provisions due to the reliance on the provisions for dedicated funding. Similarly, although there is a strong commitment to social justice in the JTAP, many of the strategies, goals, and actions for achieving the provisions for Justice – Social Justice are heavily reliant on the need for funding. Without funding, implementation will be unable to achieve goals for social justice which greatly weakens these provisions. There are also concerns for the strength of the provisions for economic diversification and social justice due to the lack of inclusion of environmental justice within the JTAP. There are vast environmental justice implications that

might occur due to the plans for economic diversification and social justice. Many of the strategies and actions for economic diversification are focused on moving Colorado past a reliance on fossil fuel industries, such as coal. These strategies and actions have rippling effects past the coal industry and into the oil and gas industry. Many of the ideas for economic diversification are focused on achieving social justice for affected workers and communities. The absence of environmental justice from the JTAP can cause future implications if interagency work on environmental justice is not progressing. The lack of provisions for Justice – Environmental Justice continues to weaken the intentions of the provisions for Economic Diversification and Justice – Social Justice. Also, it should be noted to achieve any of the pillars, there must be provisions for Governmental Support, so like Dedicated Funding Streams, governmental support will be a foundation for the success of other provisions.

While uncovering the goals and themes of the JTAP is important to understanding Colorado's transition, further investigation is needed to understand how the ongoing implementation of the transition is working towards achieving the outlined provisions. The next chapter will look at the ongoing implementation of Colorado's just transition and see if the implementation is making progress consistent with the provisions outlined in the JTAP and what potential social and environmental justice implications might be arising.

CHAPTER FIVE: IMPLEMENTATION OF COLORADO’S JUST TRANSITION POLICY

This chapter discusses the implementation of Colorado’s just transition policy and how it is working towards addressing the provisions outlined by the Just Transition Action Plan (JTAP). This chapter will discuss the findings for the question - 2) *Does its implementation weaken, reproduce, or strengthen the outlined provisions.*

5.1 Implementation of Colorado’s Just Transition

With the adoption of the Just Transition Action Plan in January 2021, the implementation of Colorado’s just transition began. evaluating the implementation of the policy, there will be the ability to assess if the provisions outlined in the JTAP are being weakened, reproduced, or strengthened in terms of the key pillars of Governmental Support (from Short to Long- Term), Dedicated Funding Stream (Short- and Long-Term), Economic Diversification (Short- and Long-Term), Justice – Social Justice, and Justice – Environmental Justice. An evaluation in terms of these pillars will help to provide a better picture to understanding implementation.








It is important to discuss the timeline for implementation because this plays a role in ongoing decisions. Implementation has been led by the Office of Just Transition (OJT) with coordination across a variety of state agencies such as the Governor’s Office, Colorado Energy Office, Colorado Office of Economic Development, and International Trade (OEDIT), Colorado Department of Local Affairs (DOLA), Colorado Department of Labor and Employment (CDLE), and the Treasurer’s Office. These state agencies, led by the OJT, have been working with coal transition communities to progress on implementation. Over the course of 2021 –2023 discussion of progress and how to continue moving forward have been highlighted by the quarterly Just Transition Advisory Committee (JTAC) meetings. These meetings have been the guiding

structures to understanding the implementation. There have been seven meetings thus far during 2021-2023, which have served the purpose to convene the JTAC to discuss updates on implementation and make decisions regarding how to move forward with implementation. These meetings were open to the public, but attendance mainly consisted of OJT staff, members of the JTAC, and employees from various state agencies. By utilizing these meetings and support meeting documents, it can be better understood how the implementation of Colorado's just transition is working to achieving the goals that have been outlined by the Just Transition Action Plan (JTAP).

5.2 Pillars of Transition During Implementation

The implementation of Colorado's Just Transition has shown that like the Just Transition Action Plan (JTAP), provisions in terms of the key pillars can range from weak to strong. Over the course of 2021 – 2023, there have been a variety of topics that have been discussed in the JTAC meetings. Some topics that were discussed were new legislation related to the transition, funding and economic diversification strategies, workforce development, briefings on relevant legal proceedings with utilities, and general state and federal government policy updates. Implementation has highlighted every key pillar of transition, but Dedicated Funding Streams and Social Justice, have been the most reoccurring pillars throughout. Looking at implementation, many of the provisions in the JTAP have stayed consistent and implementation has been able to reproduce the goals of these provisions. The only instances where provisions have been strengthened has been in the case of Dedicated Funding Streams (Long-term) and Economic Diversification (Long-term). Further discussion of this strengthening will be elaborated in the following sections. No provisions have been weakened thus far during implementation.

Table 7: How the Implementation of Colorado's Just Transition Fits Within the Key Pillars for Just Transitions

Key:  = Strengthened Through Implementation  = Weakened Through Implementation  = Reproduced Through Implementation		
Pillar	Short-Term	Long-Term
Governmental Support	Strong  <i>-Increases in staff capacity</i> <i>-Collaboration across state agencies</i> <i>-Legislative support</i>	Moderate  <i>-Beginning to align with federal government</i> <i>-Funding support from federal government</i>
Dedicated Funding Streams	Strong  <i>-Legislation, state agency coordination, and non-governmental sources have secured a significant amount of funding compared to starting point of the transition</i>	Moderate  <i>-Federal funding unlocked through Bi-Partisan Infrastructure Act, Reconciliation, and American Rescue Plan</i> <i>-Funding through Public Utilities Commission legal proceedings</i>

		<i>-Potential for Senator Bennet's National Energy Community Transition Act</i>
Economic Diversification	Moderate ↻ <i>-Community Grant Program focus on economic diversification</i> <i>-Community Investor Workshops</i>	Moderate ↑ <i>-Funding for infrastructure development through Community Grant Program to create economic opportunities</i>
	Social Justice	Environmental Justice
Justice	Moderate ↻ <i>-Funding strategies with social justice considerations</i> <i>-Engagement with workers and communities</i>	Weak ↻ <i>-Lack of coordination across state agencies about environmental justice</i> <i>-Little to no financial investment in environmental justice</i> <i>-Not considered a focal point of the transition</i>

5.2.1 Governmental Support

Short-Term Governmental Support. During implementation, there has been strong commitment to the JTAP's provisions of short-term Governmental Support through efforts to increase staff

capacity, collaborate across multiple state agencies, and the creation of further legislation to support the transition. To begin with the assessment of governmental support (short-term), it is important to look at how the OJT has increased in staff capacity since the beginning of implementation. Prior to the start of implementation meetings in 2021, the Office of Just Transition (OJT) had only been staffed by one full-time employee, the Director of the Office. During the summer of 2021, the OJT increased staff capacity to three full-time employees with the introduction of a Policy and Engagement Manager and a Community and Economic Development Manager. Later in November of 2021, the OJT once again increased staff capacity by adding another full-time employee as the Workforce Transition Manager. During the September 2022 JTAC meeting, the Director of the OJT noted that the Office planned to hire an additional full-time employee for administration and program support. There has yet to be an additional full-time employee added to the OJT and as of the 1st quarter of 2023, the OJT is staffed by four full-time employees. During the same September meeting, the OJT announced additional plans to hire a part-time employee during the 1st quarter of 2023 to begin the role as a Grant Writer/Manager. This role will be considered as a pilot program for six months with hopes for it to be a fully established position by the 3rd quarter of 2023. Regarding the fifth full-time employee mentioned in September 2022, the OJT later announced in March 2023 that they were in the second round of interviews for a role that would become an operations and program manager. This continued commitment to increase staff capacity of the Office of Just Transition during implementation is a clear commitment to Funding Strategy 3, which is ensuring “the OJT has adequate capacity to continue to develop and implement [the] Action Plan” (“Colorado Just Transition Action Plan” 2020). This strategy specifically looked at the Governor requesting a modest increase to the State budget to staff and fund the OJT through the state budget which has

since been accomplished. Ensuring staff capacity reaffirms the commitment by the State government to the Office of Just Transition and for the implementation of the transition. Although, this funding will need to be continuously advocated for in the long-term and due to the term limits for the governorship, this funding could be revoked in four years once Governor Jared Polis is no longer in office. Also, staff capacity at the OJT must be continuously increased as the transition progresses. The current staff capacity will not be enough to properly support the transition as coal facilities close in the coming years.

Like the commitment to increasing the staff capacity for the OJT, other state agencies have continued to support efforts through sharing capacity and resources during the implementation of the transition. Since the beginning of the implementation period, staff from the Colorado Office of Economic Development and International Trade (OEDIT), Colorado Department of Labor and Employment (CDLE), and Department of Local Affairs (DOLA) have been frequent guests and presenters at Just Transition Action Committee (JTAC) meetings. Not only have staff from these State agencies been present at meetings, but they have been coordinating on specific programs and actions with the OJT. For instance, at the September 17th, 2021, meeting, staff from OEDIT presented on federal funding opportunities and tracking engagement with coal communities for those opportunities. Presentations like this provided the opportunity for OJT staff and JTAC members to see how other state agencies can support transition workers and communities during the implementation period when they might otherwise not have this information. It is a good sign to see involvement by multiple state agencies in transition efforts, especially the agencies that most directly support coal transition communities such as DOLA and OEDIT. But it should be noted that attendance at JTAC meetings will not be enough moving forward. There should be consistent and thorough

collaboration between state agencies and there needs to be involvement from more agencies. Some agencies where involvement and support could be improved are with the Colorado Energy Office and Colorado Department of Public Health and Environment.

Informational presentations are not the only assistance and coordination that other state agencies have provided. The OJT has been engaging with DOLA, OEDIT, and CDLE on a variety of different programs and efforts during implementation. For instance, the OJT is leading an investor workshop in partnership with DOLA focused on community leadership and businesses. Also, the OJT worked with CDLE to summarize all OJT activities which were subsequently sent to coal transition community legislators to show the progress that has been made. The OJT has also been engaged with OEDIT on a variety of projects such as community funding and roadmap planning in Yampa Valley and Morgan County, assisting Moffat County on existing programs, and the distribution of funding to communities. In 2022, OEDIT had \$5 million approved in their budget to help assist the OJT on the implementation of the transition. This \$5 million was designed to provide additional breaks or incentives for business in coal transition communities. The approval of this funding has taken ongoing coordination between OEDIT and the OJT. Moving forward into 2023, the OJT, CDLE, and OEDIT are entering a new partnership for the new phase of grant distribution to transition communities. This partnership requires ongoing communication and coordination between the state agencies. This work between the state agencies and the OJT shows strong short-term governmental support.

Short-term governmental support has also been seen through the legislative support. Since the beginning of implementation, three pieces of legislation have been passed to help guide the OJT on implementation efforts. These pieces of legislation being HB21-1290 “Additional Funding for Just Transition”, HB22-1193 “Fund Just Transition Coal Workforce Programs”, and

HB22-1394 “Fund Just Transition Community and Worker Support”. Due to this legislation’s focus on funding, further discussion will occur in the following section. In short, these pieces of legislation have shown a commitment by the Colorado Legislature to support the work of the OJT during implementation by continuously providing government funding and guidance. Some important aspects from these bills have been providing general guidance to the OJT on distributing money for transition workers and communities, guiding the OJT to supplement existing state programs with funding, providing a centralized or common funding service, providing administrative funding, and extensions to the timeline for funding distribution. One thing to note is that HB22-1394 “Fund Just Transition Community and Worker Support” was not a bill for new funding but was focused on the timeline for funding distribution. This bill was created when the OJT came back to the state legislature and expressed concern over being able to distribute funding efficiently and equitably. The state legislature then responded by passing HB22-1394, which would give the OJT an extended timeline for funding distribution. There have also been continued efforts by the OJT, members of the JTAC, and other state agencies to work with legislators to increase workforce funding through bi-partisan efforts. These efforts show a strong commitment by the government to support and adjust to the needs of the OJT during implementation.

While there has been strong short-term governmental support, it is important to note that there are no guarantees for the future. The State must continue to show a commitment to the transition through continued action such as increasing staff capacity around the transition, furthering collaborating between state agencies, and the creation of more legislation to support the transition.

Long-Term Governmental Support. During implementation there has been moderate support for long term Governmental Support. Although many provisions have been noted to be occurring in some capacity during implementation, many have yet to come to full fruition. Thus, many of these provisions are not making active changes to support the transition.

For instance, Community Strategy 1 looks at aligning state and federal programs to assist in local strategies ("Colorado Just Transition Action Plan" 2020). To accomplish this strategy, it takes coordination and involvement between the State and Federal governments. Across the six JTAC meetings that have occurred during implementation, only during one on September 17th, 2021, did someone represent the Federal government attend. This was a staff member for Colorado Senator Hickenlooper. Although attendance to JTAC does not show the only commitment and communication between the OJT and the federal government, it does call into question how committed federal representatives might be. There is hope that the State will have better commitment and support from the Federal government in the future as Senator Michael Bennet, the other state senator for Colorado, unveiled a new bill in May of 2022, the National Energy Community Transition Action. This bill aims to support the economic development and diversification in communities across Colorado that have relied on fossil fuel-related community wellbeing. Further discussion of this bill will occur in later sections. This bill shows the intended commitment by Senator Michael Bennet to have the federal government participate and support Colorado's transition, but it has only been introduced to the Senate and has yet to be decided if this bill will be voted on by Congress. If this bill does pass, this would show support from the Federal government and would help address some of the outlined strategies such as Worker Strategy 2 which looks at encouraging the federal government to lead a national strategy for energy transition workers ("Colorado Just Transition Action Plan" 2020).

Although there is no national legislation or strategy specifically for transition communities, the federal government has shown indirect support through a variety of actions that would provide funding to the State for transition work. These policies include the Bi-partisan Infrastructure Investment and Jobs Act of 2021, Budget Reconciliation, and the Inflation Reduction Act. The Bi-Partisan Infrastructure Investment and Jobs Act created \$550 billion in new spending over the next 8 years and as part of this spending, coal communities will get additional funding for their electrical grids, power improvement, broadband, rail, environmental remediation, water infrastructure, flood, fire, and drought resilience (The White House 2021). The goal of this act is to grow the economy, create good jobs, and make the economy “sustainable, resilient, and just” (The White House 2021). This new funding led to coordination between state agencies and the U.S. Economic Development Administration (EDA), Region 10, to apply for a large grant from the Bi-Partisan Infrastructure Act, but it has yet to be announced whether the application was selected. Congress also used the reconciliation process to pass a budget resolution, or an annual budget plan with taxes, spending guidelines, and the debt limit (Goldman 2022). This budget reconciliation approved large investments in energy community reinvestment financing programs, manufacturing and industry, mining reclamation, clean energy payment program shift, tax credits for new energy technologies, and more (Goldman, 2022). These investments unlocked more potential federal dollars for coal transition communities to utilize. Lastly, the federal government passed the Inflation Reduction Act in 2022. This bill invested \$369 billion in climate and energy-related programs, unlocking more funding for more coal transition communities (Goldman 2022). Although these acts were not specifically done solely for coal transition communities, it is important that this funding was unlocked for communities to take advantage of and shows the federal government is aware that these are

needs for communities. This shows indirect support and commitment by the federal government to addressing the needs of coal transition communities. Although it should be noted that while unlocking this funding is extremely important to the implementation, there has been ongoing discussion among the OJT and JTAC that communities are “overwhelmed” by the funding and do not have the capacity to apply for and receive the available funding ([Office of Just Transition 2022](#)). This concern will require further governmental support in both the short and long-term for communities to benefit from federal government funding.

Lastly, concerning long-term governmental support, the Federal government is not the only actor. It is important that long-term governmental support also come from both the State government. While there has been legislation passed in 2021 and 2022 to support the transition, there has yet to be further legislation. The OJT will need consistent support from the Colorado State Legislature and there has not been any discussions about legislation for the current coal transition, particularly with funding. There have been discussions of potential legislation that would expand the efforts of the transition to oil and natural gas workers and communities but, with the current resources and capacity, the OJT would not be able to address this expansion. Regarding these rumors, the OJT said that they will align with the stance of Governor Polis on this issue and has yet to speak more on it.

Through the efforts by the State and the Federal government, there is overall moderate to strong support for Governmental Support in the short and long term. This means that efforts to address this pillar during implementation have been progressing well and should be expected to continue. While there are future challenges to acknowledge, such as gaining more support from the State and Federal governments in terms of funding and coordination, there has been decent progress.

5.2.2 Dedicated Funding Streams

Short Term Dedicated Funding Streams. As outlined in previous chapters, Dedicated Funding Streams (Short and Long-Term) will play a critical role in the implementation of the provisions of the Just Transition Action Plan (JTAP). As identified in the JTAP, many of the goals, strategies, and actions look at securing Dedicated Funding Streams (Short-Term).

Regarding short term Dedicated Funding Streams, it is important to discuss the foundations for funding prior to the approval of the JTAP. As mentioned previously, the original legislation HB19-1314 “Just Transition From Coal-based Electrical Energy Economy”, appropriated \$155,758 from the general fund to the Department of Labor and Employment and \$920 from the general fund to the General Assembly for implementation (Colorado General Assembly 2019). At the time of the writing and approval of the JTAP in 2020, no further funding had been approved. It was assumed that funding in HB19-1314 would not be enough for the implementation of Colorado’s just transition. Another important aspect of the initial legislation is the creation of the Just Transition Cash Fund which is a fund to help the work of the Office of Just Transition (OJT), Just Transition Advisory Committee (JTAC), and to help fund the implementation components of the JTAP (Colorado General Assembly 2019). Also, this fund permits the OJT to “seek, accept and expend gifts, grants and donations from public and private sources to support this work” (Colorado General Assembly 2019). The assumption that more funding would be needed to achieve the provisions of the JTAP has been an ongoing concern and discussion during implementation. Thus far, the methods that have been used to secure Dedicated Funding Streams (Short-Term), have been through legislation, coordination with other state agencies and support from Governor Polis, and through outside sources such as non-profits and for-profit utilities in the State.

With the need for short-term funding in mind, it was necessary for the Colorado legislature to secure that funding so that the OJT could implement the intended provisions of JTAP as it was noted that there was “limited state dollars” available to the transition without further legislation ([Office of Just Transition 2021](#)). In June of 2021, HB21-1290 “Additional Funding for Just Transition” was passed with bipartisan support from the Colorado state legislature. This legislation was the first major allocation of funding to support the implementation of Colorado’s transition. \$15 million were secured from the legislature with \$8 million of that sum coming from the general fund to the just transition cash fund and \$7 million to a “newly created coal transition worker assistance program account” in the just transition fund (Colorado General Assembly 2021). As a part of this legislation, the OJT was obligated to develop specific criteria for prioritizing expenditures and that any remaining money in the fund at the end of the state fiscal year 2022-2023 will go first to assistance programs that “directly assist coal transition workers and to support family and other household members of coal transition workers and create and implement a pilot program to test innovative coal transition work support programs” (Colorado General Assembly 2021).

In 2022, the second piece of legislation to support the transition was passed, although this legislation did not secure any new funding. HB22-1193 “Fund Just Transition Coal Workforce Programs” was passed to clarify expenditure timelines regarding the \$15 million secured by HB 21-1290 “Additional Funding for Just Transition”. HB22-1193 transferred \$1.85 million of the previous allocated money from one just transition account to another, with the requirement that 70 percent of that amount (\$1.295 million) is spent in the 2022 fiscal year. Originally, HB 21-1290 “Additional Funding for Just Transition”, required the OJT to spend all the workforce funding by June 30th, 2023, which was found to not give enough flexibility for the OJT to

address worker transition issues effectively. Due to this lack of flexibility HB22-1193 “Fund Just Transition Coal Workforce Programs”, reduced the amount of money needing to be spent in 2022 and 2023 on workforce specific issues from \$7 million to \$2.5 million, transferred \$1.85 of the original \$7 million from the Coal Transition Workforce Assistance Program Account to the Just Transition Cash Fund, with \$1,295,000 to be spent by the end of fiscal year 2022 and \$550,000 by the end of fiscal year 2023 to implement the JTAP, transferred \$150,000 of the original \$7 million to the Colorado School of Mines to expand Carbon Ore, Rare Earth, and Critical Minerals Initiative for U.S. Basins (CORE-CM initiative), and retained the remaining \$2.5 million of the original \$7 million for later appropriation ([Office of Just Transition 2022](#)). The main consideration with this legislation was to ensure that the OJT utilized the required workforce and community funds by the end of the fiscal year in a way that furthered community goals and the action plan.

The last piece of state legislation to support the transition was HB22-1394 “Fund Just Transition Community And Worker Supports” which secured the second major allocation of funding for implementation. This legislation transferred \$15 million from the general fund with \$5 million allocated to the just transition cash fund and \$10 million allocated to the coal transition workforce assistance program account and directed the Colorado Department of Labor and Employment (CDLE) through the Office of Just Transition to expend the money only for designated coal community and workers supports (Colorado General Assembly 2022). Along with this allocation of money, the act specified that money remaining in the fund or account at the end of any fiscal year will remain in the fund or account, eliminates the requirement to spend a certain percentage of the money by the end of specified fiscal years, allows roll-forward spending authority, and requires the director of the OJT to report to the joint budget committee

on history of expenditures from the fund (Colorado General Assembly 2022). The passage HB21-1290 “Additional Funding for Just Transition”, HB22-1193 “Fund Just Transition Coal Workforce Programs”, and HB22-1394 “Fund Just Transition Community and Worker Support” began the work to address a variety of JTAP provisions. Also, passage of this legislation and the funding distribution strategy adopted by the OJT has played a large role in further implementation of the JTAP in relation to Dedicated Funding Streams (Short-term).

Provisions relating to Dedicated Funding Streams (Short-Term) have not only been addressed through state legislation, but through the coordination between the OJT and state agencies such as DOLA and OEDIT. This coordination has opened more opportunities to fund the provisions of the JTAP by utilizing already existing programs and funding. There are a variety of programs that the OJT has coordinated with other state agencies specifically to help assist coal transition communities with the implementation of the just transition. For example, one program that the OJT partnered with DOLA on is the Rural Economic Development Initiative (REDI). The REDI program is designed to help rural communities comprehensively diversify their local economy and create a more resilient Colorado (DOLA, n.d.). Due to the needs of coal transition communities to diversify their local economies, the OJT partnered with DOLA to “match” any grants that had been allocated to communities, meaning communities would be receiving double the amount of money originally allocated. Like DOLA, OEDIT also has a variety of programs to assist coal transition communities, which the OJT has been engaged on and has been working with OEDIT to make sure coal transition communities are able to take advantage of financial opportunities. One important thing to note is that in 2022, Governor Jared Polis requested an additional \$5,000,000 in the budget for OEDIT to assist coal transition communities. This additional funding was separate from the previously discussed legislation and

was secured to be used for community funding through grant programs. Since the allocation of funding from the initial legislation, there has been continued coordination between the OJT, DOLA, and OEDIT on how to best distribute this funding. As seen in the discussion about Governmental Support this coordination is crucial when it comes to Dedicated Funding Streams.

Along with public sources of funding through legislation and coordination with other state agencies, there have been efforts to secure funding through private sources to achieve provisions of the JTAP. Many non-profits, including Blue Green Alliance (BGA), have been closely watching Colorado's transition due to the alignment of the mission of the non-profit and the goals of the transition. Due to concerns specifically about funding for the transition, BGA, convened a Colorado Just Transition Working Group specifically made up of representatives from multiple state and national nonprofits that work in Colorado. The goal of this working group is to strategize more ways and opportunities to help fund the implementation of Colorado's transition.

Although new funding has been acquired to achieve the provisions of the JTAP, this is not the only step to achieving those provisions. To fully achieve the outlined provisions related to Dedicated Funding Streams, the OJT was tasked with developing a plan for distribution of the funding. This initial funding strategy developed, was used for Phase I of grant funding distribution and has influenced the strategy for Phase II of grant distribution. The OJT, with approval from the JTAC, set the standard for the plan to distribute funding to communities ([Office of Just Transition 2021](#)). There has yet to be a funding strategy for the money allocated to workers. For developing the funding strategy, the OJT interpreted HB 21-1290 "Additional Funding for Just Transition," that the intended purpose would be for the \$8 million appropriated to fund implementation of the JTAP with an emphasis on Tier One Communities. For the

remaining \$7 million, the funding strategy entails expending the funding for the implementation of the JTAP, providing supplemental funding to existing state programs, consulting with the JTAC on expenditure decisions, prioritizing expenditures consistent with the level of support from community and state action teams, any funding transfers to other state agencies ([Office of Just Transition 2021](#)).

A key part of the funding strategy has been the creation of five separate “buckets” of funding. The buckets identified address many of the strategies related to Dedicated Funding Streams (Short-Term). These funding buckets were created to use funding in a way that maximizes opportunities to ensure a “successful, long-term transition, that achieves the stated goal of more family-sustaining jobs, broader property tax bases, and measurably more economic diversity than existed before coal facilities closed” (“Just Transition Action Plan” 2020). These funding “buckets” are: 1. Building Local Capacity and Support Community Strategies, 2. Supplement Existing State Programs, 3. Centralized or Common Services and Actions, 4. Leverage Investment, and 5. Administration ([Office of Just Transition 2021](#)). The bucket to Build Local Capacity and Support Community Strategies has a proposed \$5 million which a three-phased process to achieve the most effective and long-lasting economic strategies ([Office of Just Transition 2021](#)). This three-phased process will ensure transition communities with capacity and expertise to develop and implement effective transition and diversification strategies, help communities develop their transition and diversification strategies, and help communities leverage and maximize funding opportunities to implement strategies. Bucket 2, Supplement Existing State Programs, has a proposed target of \$650,000, with the goal of supporting already proven programs and strategies that will address challenges of the transition such as loss of jobs, taxes, and economic activity ([Office of Just Transition 2021](#)). These

programs and strategies are already conducted by OEDIT and DOLA and this bucket will provide supplemental funding specifically for transition communities. Bucket 3, Centralized or Common Service Actions, has a proposed budget of \$450,000, and would provide funding for commonly needed resources such as peer-to-peer learning networks, studies of economic impacts, and undertakings such as grant writing ([Office of Just Transition 2021](#)). Bucket 4, Leverage Investment, has a proposed target of \$1.5 million, with the goal of addressing Communities Strategies 5 and 6 by supporting strategies that lower risk, support a network of financial institutions, support investment, and leverage investments ([Office of Just Transition 2021](#)). The final bucket, Administration, has \$400,000 authorized by HB 21-1290, for the operation of the OJT ([Office of Just Transition 2021](#)).

Compared to when the transition began, there has been extensive work by the state legislator, state agencies, and the OJT to secure more funding. Due to this, during implementation there is strong commitment to the provisions of Dedicated Funding Streams (Short-Term). Through legislation, state agency coordination, and non-governmental sources, state funds total just over \$35million which provides a significant starting point for implementing the just transition in the short-term. The State has thus been able to address many of the initial provisions of Dedicated Funding Streams (Short-Term).

Dedicated Funding Streams (Long-Term). Like short-term funding, long-term funding for the implementation of the transition will also play a key role. There are a variety of avenues that are being considered for long-term funding. These main avenues being considered currently are through federal funding streams, litigation processes with the Public Utilities Commission (PUC), and non-governmental sources.

During implementation the OJT and JTAC have worked to secure federal funding through a variety of opportunities, which addresses a variety of provisions related to long-term funding. This has included securing long-term funding through the Federal Economic Development Administration (EDA) through the American Rescue Plan (ARPA) along with funding from the Bi-partisan Infrastructure Bill and Reconciliation. Through the EDA ARPA funding, there is at least \$300 million available to support coal communities, although this funding is regionally and nationally competitive. At the state level the OJT, OEDIT, DOLA, and CDLE planned to try and secure this funding individually or collectively. Along with EDA ARPA funding, the Bi-partisan Infrastructure Bill allocated additional funding for coal communities but no direct funding for the workforce. This money is meant to be spent by Congress over 8 years. Reconciliation also would provide investment opportunities through the energy community reinvestment financing program over multiple decades. These federal opportunities will provide ongoing long-term funding that the OJT and other state agencies can attempt to secure. There has been no allocation of this funding yet, but the OJT and state agencies discussed preparations to secure funding as it becomes available. Currently, there is not a rush to secure long-term funding immediately because communities noted that they were overwhelmed by the current number of federal resources. Due to this, the OJT and state agencies are seeking to work with communities to plan for this funding before securing more.

Other efforts for Dedicated Funding Streams (Long-Term) have come with the intervention of the OJT in legal proceedings with the Public Utilities Commission (PUC). The proceedings concern the for-profit utilities of Colorado, Public Service Company of Colorado (PSCo) and Tri-State. The first proceeding arose due to the PSCo's Electric Resource Plan (ERP) that had been brought to the PUC. The process of creating an ERP was the first of its kind due to

the legislation SB19-236 “Colorado Energy Impact Bond Act”, which was discussed in a previous section. This legislation requires that certain utilities include a Clean Energy Plan (CEP) with a Just Transition component (utility workforce and community assistance) " in their ERP filings where the utility is proposing accelerated plant closure dates to meet mandated emission requirements” ([Office of Just Transition 2021](#)). As directed by HB 19-1314 “Just Transition from Coal-based Electrical Energy Economy”, the OJT must “engage in relevant administrative proceedings” as appropriate before the Public Utilities Commission and other state regulatory agencies ([Office of Just Transition 2021](#)). The OJT intervened in the PSCo proceeding to advocate for good transition policy and practice, seek certainty for transition communities by having the PUC establish dates for early closure, and ensure equitable and substantive just transition plans. The OJT signed onto the settlement terms where PSCo committed to a community assistance plan for each transition community equal to PSCo’s forgone property tax payments “from the accelerated retirement date for either six years or until the plant’s original retirement date, whichever is earlier” ([Office of Just Transition 2021](#)). This settlement is important in utilizing the utility to help fund the transition for communities where this utility operates. With this legal proceeding, long-term funding from PSCo was secured and committed for Morgan County, Pueblo County, and Routt County. With these commitments as part of a formal settlement agreement and the binding through Public Utilities Commission Process (PUC), Morgan County will receive \$24 million, Pueblo County will receive \$250 million, and Routt County will receive \$30 million as the transition progresses in these communities ([Office of Just Transition 2021](#)). While not long-term funding for all communities, these commitments will be important to long-term efforts as the OJT can distribute other long-term funding sources for other communities that are not receiving these commitments. The other

proceeding regarding Tri-State, and specifically Craig Station, is still underway but the OJT was denied intervenor status on an argument made by Tri-State lawyers although the OJT responded to Tri-State's testimony and presented a case for a just transition. It is important to note that SB19-236 “Colorado Energy Impact Bond Act” does not apply to Tri-State and therefore Tri-State is not legally required to address the concerns of a just transition in the way PSCo must. This lack of legal requirement means that communities with Tri-State as the operator for coal fired power plants and mines do not have the same community assistance funding from the utility that PSCo communities will. Even with this caveat, Tri-State has agreed in the settlement to submit a workforce transition plan and will work with the OJT, City of Craig, Moffat County, the Colorado Energy Office, and the Office of the Utility Consumer to develop a scope of work with a third-party facilitator to discuss community assistance ([Office of Just Transition 2021](#)). This means there is an opportunity for long-term funding to be secured from Tri-State as well, but it is not guaranteed.

In tandem with long term Dedicated Funding Streams that have either been secured or are now available, there is optimism for future opportunities that would address long-term. The OJT, specifically the Director, has been actively engaged with large philanthropic organizations in Colorado. These philanthropic organizations have the potential to create more opportunities for work and engagement. Also, along with philanthropic organizations, there has been excitement for Senator Michael Bennet's National Energy Community Transition Act. This bill aims to support the economic development and diversification in communities across Colorado that have relied on fossil fuel-related community wellbeing. Specific actions in the bill would be the creation of a “federally chartered, non-governmental, nonprofit Corporation overseen by a diverse and carefully constructed Board to provide economic support to local governments and

other eligible entities in transitioning communities” that would manage a new Endowment responsible for distribution funds to transitioning communities. Also, this act would provide a significant down payment the new Endowment along with a framework to grow it overtime along with directing the Corporation to distribute funding from the Endowment to support local government services and transition efforts in eligible communities (Bennet, 2022). This bill would unlock new long-term funding avenues for the State to progress the transition. Although there has been excitement for this legislation, it has yet to pass at the federal level, meaning the OJT and the State cannot rely on it as a viable long-term funding option.

For Dedicated Funding Streams (Long-Term), there have been extensive funding resources that have been unlocked through the Bi-Partisan Infrastructure Bill, Reconciliation, and American Rescue Plan Act, but these resources will still require action by the State to secure resources. These funding resources are not guaranteed and thus are not fully committed to Colorado’s transition. Also, although funding resources have been secured through the intervention in the Public Utilities Commission’s legal proceedings, these funding resources are only secured from Public Service Company of Colorado (PSCo) and not Tri-State. Also, further long-term funding options from philanthropic organizations and the passage of Senator Bennet’s National Energy Community Transition Act have yet to occur. Due to the existence of funding resources but lack of committed Dedicated Funding Streams (Long-Term), there is moderate commitment during implementation.

5.2.3 Economic Diversification

Short Term Economic Diversification . During implementation there has been moderate commitment to the provisions of Economic Diversification (Short-Term), particularly through

the creation and implementation of the Community Grant Program and Community Investor Workshops. This commitment reproduces the provisions outlined in the JTAP.

With the passage of HB21-1290 “Additional Funding for Just Transition”, the OJT had the opportunity to strategically plan on how to best expend the newly allocated funding to achieve the provisions for economic diversification. This funding was intended to assist in the implementation of the transition based on the JTAP. The OJT has worked to address the economic diversification provisions of Community Strategy 1 which is to “align state and federal programs to assist local strategies”, Community Strategy 2 which focuses on “target[ing] early successes in business start-ups, expansions, retention, and attraction,” and Community Strategy 3 which aims to “empower communities with resources to drive their own economic transitions” (“Just Transition Action Plan” 2020). To address these provisions, the OJT has focused on targeting economic development and diversification along with regional economic coordination. To do this, they developed plans to fund capacity building and assist in the creation of diversification strategies. These plans seek to ensure transition communities with capacity and expertise to develop and implement effective transition and diversification strategies, help communities develop their transition and diversification strategies, and help communities leverage and maximize funding opportunities to implement strategies.

Out of these plans, the Community Grant Funding Program was created. This program has not only been relevant to economic diversification but is a prime example of commitment to governmental support, economic diversification, and social justice. The OJT collaborated with both Colorado Department of Local Affairs (DOLA) and Colorado Office of Economic Development and International Trade (OEDIT) to develop this program. This program focuses on working with communities on specific transition projects and getting those projects approved

for grant funding. The grants from the Community Grant Funding Program are intended to support regional economic and workforce development activities that expand local business, create new good-paying jobs, and create more diversified and strong local economies. As of April 2023, there have been 16 grants either approved or with executed contracts ([Office of Just Transition 2023](#)). Many of the community projects addressing short-term economic diversification are focused on capacity building, business improvement, and strategic planning. One example of capacity building is the City of Pueblo's use of grant funding to fund a full-time Transition Project Manager for three years ([Office of Just Transition 2023](#)). A position such as this will develop and write a long-term transition strategy and investment plan for Pueblo with specific focus on charting a path for "good-paying jobs, growth of existing businesses, creation and attraction of businesses, a more diversified local economy, and a broader property tax base" ([Office of Just Transition 2023](#)). An example of grant money used for a business improvement project is the usage of grant funding by the West End Economic Development Corporation (WEEDC) to improve the facades of main street business as part of their "business revamp" program by the local chamber of commerce ([Office of Just Transition 2023](#)). For strategic planning, the Town of Yampa is using grant funding to hire a consultant to update Yampa's 1997 Master Plan with additional components such as economic development and capital improvement to help advance economic development initiatives ([Office of Just Transition 2023](#)). All of the approved grant projects address one of the provisions related to economic diversification.

Along with the Community Grant Funding Program supporting economic diversification and development, the OJT has also been leading investor workshops and other community economic development workshops which address both Community Strategy 1 and Community Strategy 3. The OJT has one full-time employee specifically dedicated to economic development

and this staff member has so far led investor workshops in the West End, Yampa Valley, Pueblo, and Morgan County. The programs have targeted community leaders and business to help empower communities by applying for state and federal funding along with economic diversification strategies. For the investor workshops, there is the goal for two workshops in each community with one focused on community leadership and one focused on businesses.

During implementation there has been moderate commitment to the provisions of Economic Diversification (Short-Term) with the Community Grant Program's focus on economic diversification and development and Investor Community Workshops. Although there have been efforts for short-term economic diversification, it is yet to be seen if these commitments have made a difference for communities and these commitments have not addressed economic concerns for workers. For instance, some of the communities that have been granted funding for capacity building and strategic planning have been making slow progress on these efforts.

Economic Diversification (Long-Term). During implementation there has been moderate commitment to the provisions of Economic Diversification (Long-Term). Within the JTAP there were no strong goals, strategies, or actions for how to create economic diversification in the long-term. Originally, the JTAP was written with the intention that there was limited funding, so planning for long-term economic diversification was not outlined in specific detail. With the passage of multiple pieces of state legislation, potential funding from the federal government, and commitment by utilities to support the transition, the ability to address economic diversification during implementation is progressing, although it is hard to truly assess work on long-term economic diversification as it is hard to predict how current actions will affect economic diversification in the future.

The Community Grant Funding Program that has been previously discussed has led efforts for long-term economic diversification. This program has provided grants for communities to help address the transition. One of the goals for the funding was to use it to address long-term economic diversification concerns such as replacing infrastructure. As previously discussed, replacing infrastructure in the coal transition communities is important due to the loss of property taxes from the closure of coal facilities. These coal facilities pay extensive property taxes that help fund “a variety of jurisdictions such as fire protection districts, school districts, water districts, municipalities, and other key jurisdictions that provide important social services to these communities” (“Just Transition Action Plan” 2020). Within the JTAP, rebuilding this tax base by replacing infrastructure is one of the central measures of success for Colorado’s transition efforts. This is still ongoing work as replacing the tax base with new infrastructure was outlined as one of the “big-ticket” items, but the funding resources available now to the transition has begun to address this. Communities have used grant funding from the Community Grant Funding program for a variety of infrastructure projects. Some communities have focused on recreation infrastructure projects such as in Moffat County, Meeker, and Rangely. Some communities have invested grant funding for general infrastructure projects such as a business park in Hayden or an industrial park in Delta/Gunnison. Communities have also used grant funding to work on long-term economic diversification and targeted economic development plans. Addressing the provisions for Economic Diversification (Long-Term) will be an ongoing project as communities begin to expend grant money on projects, and it will be important to track success of communities in achieving goals such as replacing the tax base.

Overall, it can be seen that during implementation there has been moderate commitment to the provisions of Economic Diversification (Long-Term) with the Community Grant

Program’s focus on supporting infrastructure projects that will replace the tax base. It will be important to note that the first round of grant funding is not enough to suffice on goals regarding long-term economic diversification and there will have to be multiple rounds of grant funding to support these communities. Also, it is yet to be seen if communities are responsibly spending grant funding and if the usage of this grant funding is producing the intended results. Along with long-term economic diversification provisions for communities, it will be important to assess how the OJT and the State more broadly works to address strategies for workers as they have yet to be addressed. So far, the OJT and the State is on an optimistic path for long-term economic diversification, but they must continue to secure necessary funding to achieve outlined provisions and they must ensure that the funding is expended responsibly.

5.2.4 Justice – Social Justice

During implementation, there has been moderate commitment to the pillar of Justice – Social Justice. There were a variety of provisions within the JTAP that were identified to contribute to social justice efforts. Implementation has reinforced many of the provisions for social justice that were identified in the JTAP which shows good signs for addressing social justice concerns. It should be noted that analysis of the implementation of provisions for Justice – Social Justice has been divided into two different focuses. These focuses being implementation of provisions that affects coal transition communities and implementation of provisions that affects coal transition workers. This separation is due to the structure of the JTAP, and the work done during implementation thus far.

Coal Transition Communities. While coal transition communities and coal transition workers are interconnected, the JTAP separates them out into two different subcategories. For communities, the goal is to “help each community end up with more family-sustaining jobs, a broader property

tax base, and measurably more economic diversity than when this process began in 2019” (“Just Transition Action Plan” 2020). The main provisions of Justice – Social Justice that support this subgoal are Community Strategy 3 and Community Strategy 5. Community Strategy 3 seeks to “empower communities with resources to drive their own economic transitions” while Community Strategy 5 seeks to “identify and support state, regional, and local institutions to facilitate needed investments” (“Just Transition Action Plan” 2020). The community subgoal and these two specific strategies have helped guide how social justice is being addressed during implementation.

Throughout implementation, efforts to social justice have become interwoven with the other pillars such as dedicated funding streams and economic diversification. The provisions related to the pillar of Dedicated Funding Streams (Short-term and Long-term) have been crucial to achieving Social Justice provisions and so the work of securing and distributing funding has been a guiding principle for achieving social justice goals for coal transition communities. Some of the most important efforts in achieving Justice – Social Justice have been around Phase 1 and Phase 2 of the Community Grant Funding program. As described previously, there was \$8 million allocated for coal transition communities to help implement the just transition. The OJT decided to identify and prioritize this funding for efforts that would result in more family-sustaining jobs, broader property tax bases, and measurably more economic diversity. To achieve this goal, the OJT identified six provisions of the JTAP that would help guide funding allocations: Capacity Building and Long-Term Transition Strategies, Unique and time-limited business opportunities, Strategically leveraging long-term private investment, Unique and time-limited infrastructure opportunities, Maximizing coordination and collaboration, [and] Securing more and longer-term funding” ([Office of Just Transition 2021](#)). This funding was then divided

into three buckets, \$6 million for a Community Bucket which was allocated to coal transition communities and other eligible entities for projects consistent with the six provisions, \$1.6 million for Central Projects and Investor Bucket which would be allocated for the OJT to use to begin implementation of other strategies in the JTAP, and \$400,000 for the Administration Bucket ([Office of Just Transition 2021](#)). It should be noted that eligible entities are different than coal transition communities. Eligible entities are “entities that serve a coal transition community” including economic development districts, a county, municipality, city and county, or other political subdivisions of the state, an Indian tribe, an apprenticeship program that is registered with the United States Department of Labor or a state apprenticeship council, and institution of higher education, or a public or private non-profit organization ([Office of Just Transition 2021](#)). The OJT was able to use this bucket to make direct grants to communities or eligible entities or make a transfer of the money to other state agencies on the behalf of communities or eligible entities, making it important to assess in terms of Justice – Social Justice ([Office of Just Transition 2021](#)).

An extremely important aspect to the Community Grant Funding Program is the development of specific “earmarks” based on a formula developed by the OJT ([Office of Just Transition 2022](#)). As discussed previously, there are differences between Tier One communities and Tier Two communities with Tier One community’s being those that would need more extensive support than Tier Two Communities. Within Tier One communities, there were specific communities that were identified to need even more support than others. To ensure that the distribution of funding was equitable among communities needing support, the OJT developed an “equity” formula that “takes the number of coal transition facilities (power plants or mines) in each community and multiplies it by a timing (or urgency) factor reflecting whether

those facilities have already closed (factor of 2) or are projected to close in the future (factor of 1)” ([Office of Just Transition 2022](#)). This formula would then result in 12 points that would reflect the relative impacts of the transition for communities with a 13th point added to represent all Tier Two communities collectively ([Office of Just Transition 2022](#)). This created a total of 13 points in the distribution formula with each point representing about 7.7 percent or about or about \$461,538, of the \$6 million in the Community Bucket ([Office of Just Transition 2022](#)). The following table, “13-point Community Grant Funding Formula Phase 1,” outlines how the 13- Point Formula has appeared across the Community Grant Funding Program. This table also outlines how much funding was earmarked to each community, funding allocated as of June 1, 2022, and how much funding was allocated only out of the community bucket.

Table 8: Outline of the 13-point Formula for Community Grant Funding Phase 1 ([Office of Just Transition 2022](#))

Tier	Community	Total Points	Earmark	Funding Allocated as of June 1, 2022	Funding Allocated from Community Bucket Only
Tier One	The Yampa Valley: Moffat County, Rio Blanco County, Routt County, Craig, Hayden, Meeker, Oak Creek, and Rangely	6	\$2.769 million	\$1.901 million	\$1.0 million

Tier One	The West End: Montrose County, Naturita, Nucla, and Norwood	4	\$1.846 million	\$927,333	\$786,258
Tier One	Morgan County, Brush, Fort Morgan, and Wiggins	1	\$461,538	\$140,000	\$140,000
Tier One	Pueblo County and Pueblo	1	\$461,538	\$461,538	\$461,538
Tier Two	Delta-Gunnison County, El Paso County, La Plata County, Larimer County	1	\$461,538	\$330,000	\$330,000

As of 2023, Phase 1 of the Community Grant Funding Program as described above has been completed and grants have been allocated to communities and eligible entities. The OJT was very consistent with updating the JTAC on the grant funding program throughout 2021 and 2022. At almost every meeting during this time, the OJT updated the JTAC on the progress of the grant program. These updates came in the form of finalizing funding guidance such as on the 13-point formula, a grant program process overview, discussions on funding options, and reports on funding allocations. Regarding Justice – Social Justice, the 13-point formula was extremely important to ensuring equitable distribution of funding to communities that would be most

impacted by the transition. This work has been consistent with addressing provisions related to Justice – Social Justice such as Community Strategy 3 and 5.

As time has progressed, the OJT proposed a new round of community grants with an additional \$5.25 million in community assistance grants through fiscal year 2026 for the purposes outlined in HB22-1394 “Fund Just Transition Community and Worker Supports” ([Office of Just Transition 2022](#)). This new round has become known as Phase 2 of the Community Grant Funding Program. The proposal for this new funding round was to divide that \$5.25 million into two buckets of \$2.625 million where one bucket would utilize the 13-point formula and be known as the Formula Bucket and the other one would be considered the Equity Bucket. The Equity Bucket would be “available only to eligible entities in or serving those communities or jurisdictions where Tri-State has or had a power plant and pays or paid property taxes (Moffat County and the West End)” ([Office of Just Transition 2022](#)). This was in response to observed inequities that are being created by a difference in community assistance communities are likely to receive from Xcel or Tri-State utilities ([Office of Just Transition 2022](#)). The Equity Bucket was created based on a 3-point formula with two points for Moffat County and 1 point for the West End. After the implementation of the original 13-point formula, Xcel Energy committed to “provide the equivalent of six years of lost property tax payments to communities in Morgan County when it converts Pawnee Station to gas; six years of lost property tax payments to communities in Routt County when it closes Hayden Station; and 10 years of lost property tax payments to communities in Pueblo County when it closes Comanche Station” ([Office of Just Transition 2022](#)). With these commitments as part of a formal settlement agreement and the binding through Public Utilities Commission Process (PUC), it was clear that Morgan County receiving \$24 million, Pueblo County receiving \$250 million, and Routt County

receiving \$30 million would be in a better position than other Tier One communities ([Office of Just Transition 2022](#)). With Tri-State, there is another formal agreement adopted by the PUC in which Tri-State agreed to be in a facilitated process to identify potential options for community assistance in Moffat County but there is no current commitment by Tri-State. Also, Tri-State has committed to a total of \$550,000 for the West End. Based on “conservative and unofficial present-value projections based on existing tax records from the relevant county assessor,” the OJT calculated that if Tri-State were to provide the same level of support to Moffat County, the county would receive \$44 million, and for the West End, they would receive \$7 million ([Office of Just Transition 2022](#)). The OJT identified this disparity and projected that there would be significant inequities between communities based upon community assistance from the utilities. The proposed Formula and Equity Buckets were both accepted by the JTAC, leaving the OJT to move forward with this decision for Phase 2 of the Community Grant Funding. The following tables, Table 9 and Table 10, respectively, outline the 13-Point Formula and 3-Point Equity Formula for Phase 2 of the Community Grant Funding Program.

Table 9: Outline of the 13-point Formula for Community Grant Funding Phase 2 ([Office of Just Transition 2022](#))

Tier	Community	Total Points	Earmark
Tier One	The Yampa Valley: Moffat County, Rio Blanco County, Routt County, Craig, Hayden, Meeker, Oak Creek, and Rangely	6	\$1,211,538 million
Tier One	The West End: Montrose County, Naturita, Nucla, and Norwood	4	\$807,692 million
Tier One	Morgan County, Brush, Fort Morgan, and Wiggins	1	\$201,923
Tier One	Pueblo County and Pueblo	1	\$201,923
Tier Two	Delta-Gunnison County, El Paso County, La Plata County, Larimer County	1	\$201,923

Table 10: Outline of the 3-point Formula for Community Grant Funding Program Phase 2 Equity Bucket ([Office of Just Transition 2022](#))

Tier	Community	Total Points	Earmark
Tier One	Moffat County	2	\$1.75 million
Tier One	The West End: Montrose County, Naturita, Nucla, and Norwood	1	\$875,000

As of January 2023, Phase 2 of the Community Grant Funding began. The OJT and the Office of Economic Development and International Trade (OEDIT), partnered together to provide these grants to coal transition communities. These grants are intended to support regional economic and workforce development activities that expand local business, create new good-paying jobs, and create more diversified and strong local economies. This grant cycle will be open for an entire year unless funds are all granted before then. The eligible uses for grants were outlined as: Expand capacity to coordinate local or regional economic development and workforce development programs, Support targeted economic development efforts that are expected to create jobs that provide incomes at or above the median income of the community, generate new or increased property tax payments, and/or increase the economic diversity of your local economy, Provide start-up or expansion and retention assistance for new or existing local businesses, Incentivize new private financial investment that is expected to create jobs that provide incomes at or above the median income of the community, generate new or increased, property tax payments, and/or increase the economic diversity of your local economy, Support site selection activities that are expected to result in new jobs that provide incomes at or above the median income of the community, generate new or increased property tax payments, and/or increase the economic diversity of your local economy, Provide technical assistance for any of these allowed uses ([Office of Just Transition 2022](#)). As part of the grant process, the OJT and OEDIT are requiring that applications meet with staff beforehand, secure support from 60 percent of more of the designated jurisdictions, and then apply for funding ([Office of Just Transition 2022](#)).

Along with the Community Grant Funding Program, the OJT has been working on other aspects to address Community Strategy 3 and Community Strategy 5. In the March 2023

meeting, the Director of the OJT suggested that it is time for staff and the JTAC to work together to update the JTAP. This suggestion has been from the Director of the OJT and is not a legislative requirement. The goal is to discuss progress, lessons learned, and try to create new goals and objectives for workers and communities. To update the plan, the Director proposed the idea of forming subcommittees, like during the formation of the original plan. The original subcommittees consisted of the Financing Subcommittee, Workers Subcommittee, and Economy & Community Development Subcommittee. The newly proposed subcommittees would expand to include Community Support, Worker Support, Disproportionately Impacted Communities and Stakeholder Engagement, State and Federal Policy, and Funding. Membership for these committees would be made up of core JTAC members with one OJT staff member as the lead. There were no initial comments from JTAC members regarding the suggested structure and the suggested core JTAC members for each subcommittee. Regarding Justice – Social Justice for communities, the Community Support subcommittee would play a crucial role. As of right now, there are no specifics on what these subcommittees might want to do regarding the provisions of the JTAP for communities, but this subcommittee would allow for JTAC members to bring up any social justice concerns.

Also, another important thing to note for the future of the JTAC, is at the same meeting, it was proposed by staff for the JTAC to visit some of the coal transition communities for future meetings. While not necessarily tied to provisions of the JTAP, these meetings are seen as crucial for building relationships and ensuring successful implementation. These meetings would be in addition to JTAC meetings and other core community meetings. The communities that were suggested by staff were Craig/Meeker, Craig, or Nucla/Naurita. With these meetings, JTAC members would be able to see the communities directly that are being affected by the transition

and be able to speak to community members. Through this, the JTAC could help achieve Community Strategy 5 by showing their support for these communities and helping to empower them further with that physical support. There were initial questions and concerns from the JTAC. Many members brought up that the OJT and JTAC has mainly visited northwest Colorado, specifically Craig. These members strongly suggested that the OJT and JTAC explore tours in other parts of the state. Through further discussion, OJT staff said they would redesign the proposal of which communities to visit and would prioritize a variety of communities with the specific goal of visiting all Tier One communities between the spring of 2023 and the summer of 2023.

There has been extensive work to address the provisions of Social Justice relating to coal transition communities. Much of this work has come through addressing Community Strategies 3 and 5. The OJT and the JTAC have shown clear intentions to keep social justice and equity in mind as implementation progresses. These intentions will be important for further implementation efforts.

Coal Transition Workers. Like the provisions for achieving Social Justice for coal transition communities, there has been ongoing efforts to address social justice provisions for workers. These specific provisions are Worker Strategy 1 “empower[ing] workers and their families to plan early for future success,” Worker Strategy 2 “encourag[ing] the federal government to lead with a national strategy for energy transition workers,” Worker Strategy 3 “prepar[ing] for future consideration, a detailed state program to help displaced workers build skills, find good jobs, or start businesses,” and Worker Strategy 4 “explor[ing] strategies to protect family economic security through the transition” (“Just Transition Action Plan” 2020).

The main way the OJT has been working to address provisions for workers is through the coal transition workforce assistance program. The coal transition workforce program was originally created through HB21-1290 “Additional Funding for Just Transition.” This legislation transferred \$7 million from the general fund, as previously discussed, specifically for workforce issues (Colorado General Assembly 2021). Within the legislation, the funding is subject to the requirements that it is spent for programs that will directly assist coal transition workers including programs that may be used for apprenticeship programs, aid the implementation of the JTAP, provide tuition reimbursement, provide job search assistance, provide individualized financial and transition planning, or provide other services authorized by the Federal “Workforce Innovation and Opportunity Act such as on-the-job training, subsidized employment, or other strategies that aid in individual transition plans (Colorado General Assembly 2021). If the money remains unexpended by the applicable federal year, the expenditures may include supporting coal transition worker families or creation and implementation of a pilot program to test coal transition work support programs (Colorado General Assembly 2021). As previously mentioned, there was originally a requirement that 70% of funds were spent within fiscal year 2021-2022, with remaining money spent in fiscal year 2022-2022 (Colorado General Assembly 2021). The OJT later advocated for HB22-1193 “Fund Just Transition Coal Workforce Programs” which provided more flexibility to expending the funds due to concerns of effectively addressing worker transition issues. As of April 2023, no money has been expended for the coal transition workforce program. It has been discussed that this is intentional because the OJT first seeks to engage coal transition workers to discover what they need so that they can create strategies for expending money based on coal transition worker needs.

Efforts to address provisions related to Justice – Social justice for workers is being led by the Transition Workforce Program Manager at the OJT. Initially, staff with the OJT were able to meet with workers in Yampa Valley to gather initial thoughts and opinions. Further information was needed to plan for addressing worker needs, so the OJT put out a worker survey to coal transition workers in Northwest Colorado from December 2022 to January 2023. Data from this survey is undergoing further analysis but initial results show that workers are most concerned with a loss of income, loss of health insurance, and a negative community impact ([Office of Just Transition 2023](#)). Also, workers expressed that education/training and health insurance would be the most helpful assistance for them during the transition. The OJT was able to meet with workers within Northwest Colorado as well to gather further data. Some of the largest takeaways are workers are requesting for increased communication from the OJT, a navigator hub or transition hub for support and resource information, and accessible training and local assistance while transition funding is not available ([Office of Just Transition 2023](#)). Through this work, the OJT developed some next steps of further analyzing data, creating a worker webpage, plans for increased communication, gathering of existing resources for current needs, and development of a transition support plan in conjunction with the JTAP ([Office of Just Transition 2023](#)). The OJT plans to use this data and information to develop further programs for workforce transitions. There are no current plans for expending money for the coal transition workforce program. Further discussion for the coal transition workforce is ongoing and in the proposal for the update of the JTAP, the Director proposed a Workers subcommittee. This subcommittee has the potential to discuss how funding might be expended and how to develop programs that will support workers.

Along with work that the OJT is doing for the coal transition workforce program, there are efforts for workforce planning by the public utilities, specifically Xcel. Currently Xcel has submitted plans for asset bids so they might redevelop a current coal fired power plant into another facility. From these bids, two of the proposed were a biomass facility or molten salt storage. As of March 2023, the senior manager of workforce planning at Xcel said that molten salt storage would be too costly, so the utility is primarily looking at a biomass facility. It was noted that the goal of Xcel is to look for alternative assets solutions so that workers can stay in the community and with their current employers. The best solution would be for workers to not lose their jobs and have to transition.

Another important aspect of Social Justice for workers is the ability of the OJT to address Worker Strategy 2. The federal government can play an important role by leading with a national strategy for coal transition workers. March 2022, the JTAC discussed Colorado Senator Michael Bennet's National Energy Community Transition Act of 2022. As previously discussed, this bill aims to support the economic development and diversification in communities across Colorado that have relied on fossil fuel-related community wellbeing. This bill would unlock other funding avenues for state agencies to enact policies and plans to address social justice implications. Although there is excitement about this federal legislation from members of the JTAC, the legislation has not been passed by the federal government and there are no signs that it will become law.

During implementation, there is moderate commitment to the provisions of Justice – Social Justice. Although some provisions around social justice have been addressed, implementation is ongoing and evolving. There is still the need for further planning, particularly concerning workers. Much of the work that has occurred thus far has only been surrounding the

coal transition community. This has caused concerns from workers regarding the implementation. Some of these concerns have come in the form of requests for improved transparency and communication. For instance, there is concern around the transparency for grants that have been distributed to municipalities. Many community members are concerned that these funds are not being used by municipalities responsibly. Also, they are concerned about where the money has gone and how it is being spent. Along with concerns over transparency of grants for communities, many workers have expressed concerns that they need money as soon as possible. Also, workers have expressed concerns regarding a lack of communication about the implementation process. about the lack of money that has been expended for workers and the lack of communication about the implementation process. As seen in the survey data, 32% of workers are ready to begin their transition planning but might be unable to do so without funding support ([Office of Just Transition 2023](#)). Along with transparency, communication is a concern that is often brought up among the JTAC and OJT staff. Staff have shared with the JTAC that workers and communities are asking for more constant and consistent communication. It is unknown exactly all the strategies that have been used by staff to communicate with workers and communities but there is still a gap between what staff are doing and what workers and communities need/desire. These concerns and gaps cause ongoing concerns for the work that is being done to address the provisions related to Justice – Social Justice

5.2.5 Justice – Environmental Justice

During implementation there has been a weak commitment to environmental justice. Environmental justice is a key part of just transitions and must be considered when addressing a transition. As mentioned previously, environmental justice has largely been excluded from the provisions of the Just Transition Action Plan (JTAP) and there are weak signs of Justice –

Environmental Justice across the implementation of the plan. Within the JTAP, environmental justice is only mentioned across two acknowledgement sections, *Planning for a Just Transition in a Time of COVID* and *An Ongoing Commitment to Disproportionately Impacted Communities*. During implementation, there has been a lack of discussion about the role of environmental justice in the transition.

Environmental justice, although not said explicitly, has only been brought up four times during implementation across the seven different Just Transition Action Committee (JTAC) meetings. These comments about environmental justice were also extremely brief. The first comment about an environmental justice concern was at the March 2022 meeting. One JTAC member expressed concerns during a commenting period about the ongoing Tri-State settlement. The OJT posed an open question for concerns from the JTAC, and a member asked what role water rights would play in this case due to concerns about water rights being community assets that are at risk from discharge of pollution. The member brought up that water pollution needed to be a part of the discussion in Yampa Valley based on lessons learned in the West End. Although water pollution was a concern, for the case with Tri-State, Tri-State owns the water rights in Yampa Valley as opposed to communities where water is leased from the local municipality. There was no further discussion about pollution of the water, only discussion regarding water being treated as a potential community asset for monetization and therefore should be considered for community assistance coordination. This comment showed that there is interest by JTAC members to discuss environmental justice issues but there is a lack of prompting and/or opportunities for this to occur.

Another instance of environmental justice occurred at the December 2022 meeting in both the documents summarizing the Colorado Just Transition Statutes as of 2022 and the Fiscal

Year 2022 Expenditure Memorandum. Under Colo. Rev. Stat. § 8-83-501, the Colorado general assembly outlines that Coloradans are already experiencing the worst effects of climate change in the forms of more extreme weather, snowpack melt, and higher temperatures ([Office of Just Transition 2022](#)). This statute notes that to address climate change in addition to the change economics of power generation, greenhouse gas emissions must be reduced ([Office of Just Transition 2022](#)). With this in mind, Colorado companies and policy makers have worked to drive new investments from the clean energy economy into transitioning communities but “there does not exist at the state or federal level sufficient resources to assist workers and communities impacted by changes in Colorado’s coal economy, and there does not exist sufficient coordinated leadership within Colorado’s state government to align and deliver assistance to these coal communities and workers” ([Office of Just Transition 2022](#)). As such, the assembly declared that a strong and comprehensive policy was needed to invest new financial resource into coal communities to diversify and grow local economics in a sustainable and equitable way, which thus became Colorado’s just transition ([Office of Just Transition 2022](#)). As part of this declaration, the assembly noted that “Colorado must ensure that the clean energy economy fulfills a moral commitment to assist the workers and communities that have powered Colorado for generations, as well as the disproportionately impacted communities who have borne the costs of coal power pollution for decades, and to thereby support a just and inclusive transition” ([Office of Just Transition 2022](#)). This statute can be seen to appear similarly in the JTAP where the commitment to disproportionately impacted communities is outlined. There was no discussion about this statute during the meeting where it was shared and there has not been any discussion about how to address disproportionately impacted communities at any meetings.

There has been another inclusion of environmental justice in the implementation, although seemingly unintentional, through the Community Grant Funding Program. Two of the executed grant contracts, one with the Town of Naturita and the other with the neighboring Town of Nucla both fund upgrades to wastewater systems. In Naturita, the wastewater treatment system, specifically the treatment plant lagoon and portions of the sewer collection system is noted to be outdated and in violation of state public health standards. Although public health standards are a major concern, the wastewater treatment system has also served as a barrier to attracting or expanding existing businesses in the community. In the Town of Nucla, it is noted that the water distribution lines are “50-60 years old and require... upgrades [that are] foundational for attracting new businesses and tourists and diversifying its economy” ([Office of Just Transition 2023](#)). It is important to address upgrades to the wastewater systems not only for the purpose of attracting new businesses and diversifying the economy but because out of date wastewater systems are a public health concern which is an environmental justice issue. Both the Town of Naturita and Town of Nucla lie within Montrose County and according to Colorado Environmental Justice Screen which is an interactive environmental justice mapping tool and health screening tool developed by the Colorado Department of Health and Environment (CDPHE), Montrose County is one of the more burdened communities when it comes to environmental inequities with a score in the 90th percentile (CDPHE, 2023). The EnviroScreen Score combines population characteristics and environmental burdens with a score from 0 to 100 and a higher score representing the highest burden (CDPHE, 2023). Montrose County is also within the 80th percentile for its pollution and climate burden and the 75th percentile for health and social factors (CDPHE, 2023). The pollution and climate burden score combines the components of environmental exposures, environmental effects, and climate vulnerability with a

range from 0 to 100 and a higher score representing the most environmentally burdened communities (CDPHE, 2023). The health and social factors score combines sensitive populations and demographics with a range from 0 to 100 and a higher score representing the most susceptible and vulnerable populations (CDPHE, 2023). This data from the State's own environmental justice mapping and screening tool shows that Montrose County, the Town of Naturita, and the Town of Nucla are extremely burdened by environmental injustices and by giving these grants to Naturita and Nucla, it shows that there is a small, seemingly unintentional, commitment by the OJT to address concerns that are both for environmental justice and economic development. It has yet to be seen if other communities will propose grant funded projects that address multiple concerns such as environmental justice and economic development.

A recent development in addressing environmental justice has come from the suggestion that it is time for the JTAC to update the JTAP. As previously mentioned, the Director of the OJT suggested breaking the JTAC into subcommittees to update the JTAP. Regarding environmental justice, the subcommittee of interest is the Disproportionately Impacted Communities and Stakeholder Engagement committee. It was noted by the Director that in the initial drafting of the JTAP, there was not a thorough job on inclusion of disproportionately impacted communities and the OJT would like to make sure this is better for the updated plan. It is a good sign that the OJT is keeping in mind disproportionately impacted communities for the creation of an updated JTAP but compared to other committees, there were only three JTAC core members suggested to this committee whereas other committees ranged from six to thirteen people. It should also be noted that two of the suggested JTAC core members that would join this committee are those that represent disproportionately impacted communities but are rarely in

attendance at the JTAC meetings. It is a major concern that those that were selected to represent disproportionately impacted communities were not present to discuss the proposition for these subcommittees nor were they often present to discuss matters of the transition.

Also as mentioned in the previous chapter, the OJT is not the agency leading environmental justice efforts at the State as that has fallen within the jurisdiction of Colorado Department of Public Health and Environment (CDPHE). Through HB21-1266 “Environmental Justice Disproportionately Impacted Community,” CDPHE is supposed to be working towards addressing environmental justice within its own agencies and helping with interagency efforts on environmental justice. Currently, it appears there is a lack of this interagency efforts between CDPHE and Colorado Department of Labor and Employment (CDLE), where the OJT is housed. There has been no attendance by any CDPHE staff members at any of the JTAC meetings during the time of implementation and there has been no discussion items about interagency collaboration between CDLE and CDPHE. Also, it is extremely important to note that both CDPHE and the OJT have committed to assisting disproportionately impacted communities (DICs) but, the definition of DICs varies between CDPHE and the OJT. CDPHE noted that there are four different definitions, not including the definition that the OJT uses, for DICs ([Colorado Department of Public Health and Environment 2023](#)). This variation in definitions shows a lack of coordination among the agencies. These varying definitions of DICs show an ongoing lack of coordination among agencies regarding environmental justice. The Environmental Justice Task Force did recognize the lack of a single standardized statutory definition of DICs and recommended that there is the creation of a single standardized statutory definition that includes all the same factors for all state agencies including a “range of factors relevant to health and economic impacts” ([Colorado Department of Public Health and Environment 2022](#)). To amend

this recommendation by the task force, in April of 2023, CDPHE proposed to consolidate and amend the definition for "Disproportionately Impacted Communities" ([Colorado Department of Public Health and Environment 2023](#)). Although, with this proposal, coal transition workers and communities are still not considered DICs and it is clear that because of this, CDPHE is not considering the transition from coal to be an environmental justice issue.

Due to the lack of discussion around environmental justice, a lack of investment in grant projects to address environmental injustices, and the lack of coordination across state agencies that has resulted in varying definitions of DICs, commitment to the provisions of Justice – Environmental Justice can be considered extremely weak during the implementation of the transition. This aligns with the JTAP that treated environmental justice more of an afterthought rather than a goal to achieve during the transition.

CHAPTER SIX:

DISCUSSION OF FINDINGS AND IMPLICATIONS FOR THE FUTURE

This chapter will answer the key questions of how the provisions of Colorado's just transition policy are measuring up to the pillars of just transition during the implementation stage. This will inform what the implications and impacts of the provisions have been. Also, this chapter will also discuss what lessons are learned from the case of Colorado's just transition policy provisions and implementation. The lessons learned from this case can continue to inform Colorado's just transition in the future and can help to inform the creation and implementation of other just transitions across the United States and globe.

6.1 Governmental Support

Governmental Support will continue to be one of the foundational pillars for the ongoing success of Colorado's just transition due to this transition being spearheaded by the State government. This pillar is split into short-term and long-term governmental support to provide a better understanding. In the short term there has been successful and strong work regarding governmental support. It will be important to continue to operationalize governmental support through funding for the implementation, collaboration amongst state agencies, and utilizing of rulemaking power at the State. There has been a strong commitment by the State government through a variety of activities such as the creation and staffing of the Office of Just Transition, ongoing legislative activity in support of the transition, support by the Governor, and coordination among state agencies specifically in support of the transition. This has been extremely important for the implementation of the transition and achieving the outlined provisions. If there was a lack of short-term governmental support, there could have been

ongoing negative implications from the start of the transition. With the strong commitment by the State in the short-term, Colorado's transition has been put on the track towards success. Although, in the short-term, the State has been the main government body supporting the transition, there has yet to be strong commitment by local governments and the federal government to assisting in the transition. Support from multiple levels of government, not just the State, will be needed moving forward into further stages of implementation. Also, the State must continue to support transition efforts, especially by continuing to expand the capacity and resources for the Office of Just Transition.

In the long-term, it will be challenging to achieve the amount of governmental support needed for a successful implementation. The State has made long-term commitments to support the transition and will need to continue and improve efforts that have been ongoing in the short term. Although the federal government has shown interest in Colorado's transition through a variety of activities such as Senator Bennet's proposed National Energy Community Transition Action, there has not been direct action. Currently, the federal government is only providing support through the unlocking of new funding streams for Colorado's transition through the Bipartisan Infrastructure Investment and Jobs Act of 2021, Budget Reconciliation, and the Inflation Reduction Act. It is not clear if these actions can be constituted as true support from the federal government for Colorado's transition as they were not done in specific support of the transition but in more tangential support as the federal government works to achieve its own goals. To truly achieve the outlined goals for Colorado's transition, the State must receive specific and direct support from both local governments and the federal government. Thus far, government support in both the short-term and long-term has been adequate for where Colorado's transition is at, but this support must be guaranteed for the future. Without strong governmental support in both the

short and long-term, the ability to achieve the outlined provisions of the transition will be unreachable. Having strong governmental support is foundational to the success of the transition.

6.2 Dedicated Funding Streams

Like Governmental Support, Dedicated Funding Streams are foundational to the success of Colorado's transitions and the ability to achieve the outlined provisions. Both Governmental Support and Dedicated Funding Streams provide the foundations for the ability of the other pillars to succeed. Also, like Governmental Support, it is important to look at Dedicated Funding Streams in both the short-term and the long-term. In the short term, there has been a strong commitment to dedicated funding streams. The State has been able to secure about \$35 million in funding through legislation and state agency coordination. There are also further efforts to secure funding from non-governmental sources. When the initial legislation for the transition was passed, there was just under \$200,000 allocated to the concept of a just transition. Decision makers have put extensive effort into securing further funding to help to achieve the envisioned goal of a just transition for Colorado. The short-term funding secured thus far has been enough to achieve many of the short-term efforts identified in the Just Transition Action Plan. Previous concerns for a lack of funding have been temporarily relieved due to these efforts. With this short-term funding, the State has placed itself on track to achieve many short-term goals, but it is yet to be seen if the State will be able to achieve the long-term goals of the transition as these require more funding in the long-term.

In the long-term, efforts for dedicated funding streams still need considerable work. As mentioned in an earlier section, it is estimated that the transition will need about \$100 million a year as coal plant closures accelerated into 2025 and 2026 (Best 2021). It is important to point out that this estimate was also pre-inflation. There are ongoing conversations on how to properly

fund the transition in the long-term and it has been acknowledged that current funding levels are not enough. The State must continue efforts to share the burden of funding the transition moving forward. There is hope for long-term funding from the federal government through the Bipartisan Infrastructure Investment and Jobs Act of 2021, Budget Reconciliation, and the Inflation Reduction Act, but these resources will still need to be acquired through State action. Also, the current potential federal funding streams should not be the only avenues the State relies on to help fund the implementation of Colorado's just transition. There needs to be funding efforts dedicated to transition efforts from the Federal government that are consistent and reliable as the transition progresses. Along with hope that funding might be acquired from the Federal government, there are efforts through legal proceedings to make sure utility companies such as Public Service Company of Colorado (PSCo) and Tri-State are held accountable to assisting in the transition. There have been commitments from PSCo to help fund the transition moving forward but there is still a lack of commitment from Tri-State. The State must hold utilities accountable to assist in the transition by securing long-term funding. With further efforts, the State can secure the long-term funding it needs to achieve the outlined goals in the JTAP, but it is not enough to hope that this funding comes. The State must be proactive and strategic about securing this funding, because without it, the provisions of the transition will not be achieved.

6.3 Economic Diversification

As outlined in the JTAP, Economic Diversification is one of the main goals for Colorado's transition. Many of the implementation efforts thus far have been geared towards the concept of economic diversification for coal transition communities. In the short-term, there has been moderate commitment to achieving the provisions for economic diversification. It should be stated that efforts towards economic diversification are heavily reliant on dedicated funding

streams, so it is crucial that dedicated funding streams in both the short-term and long-term are secured first. The commitment to economic diversification has been led largely by the Community Grant Program's focus on economic diversification and development along with Investor Community Workshops. The Community Grant Program has granted money directly to coal transition communities that are being used for economic diversification. Although money has been granted to local governments, it has yet to be seen if these resources are truly making an impact regarding economic diversification as many of the projects that were granted money have yet to be completed. There has been a lack of updates about the progress on how local governments are operationalizing this funding. With a lack of updates, it is difficult to see whether this money is being utilized effectively and efficiently. It is difficult to provide a true assessment of the short-term economic diversification efforts due to this. The only assessment that can be given is that there has been money granted for these efforts and now it is up to local governments to utilize this funding to achieve the outlined goals. It will be important to see in the short term how the State government continues to support these efforts.

Regarding long-term commitments to economic diversification, there has been moderate commitments during the implementation. Like short-term economic diversification, long-term efforts are highly tied to dedicated funding streams. As there are not fully secured long-term dedicated funding streams, there are potential problems that will arise for achieving long-term economic diversification goals. For instance, there are still concerns regarding replacing and rebuilding the tax bases for coal transition communities. There are not strong plans on how this will be achieved in the long-term and while the Community Grant Program has made small efforts towards this goal, they will not be enough to achieve the goal. Replacing and rebuilding the tax base for coal transition communities will require extensive long-term funding that has yet

to be secured. This poses continued concerns if communities will be impacted more harshly in the future if this funding is not secured. It will be crucial for the State to secure this long-term funding and work directly with coal transition communities to develop transition plans for long-term economic diversification goals. Also, it will be important for the State to assess how communities are expending funding in the short-term and assess whether those efforts are impactful in the long-term. By assessing the short-term work, the State will have a better understanding of how to support communities and workers in the future. Along with economic diversification in the communities, the State still needs to address goals for economic diversification that are tied directly to workers. There has been a lack of efforts by the State to address any concerns of workers thus far and the focus has been on the communities themselves. It is not clear yet how the implementation of the transition might achieve the goals for economic diversification as these efforts are still in very early stages.

6.4 Justice

Social Justice. Efforts for Social Justice will show if the implementation of Colorado's transition is truly "just." With this, the transition can be known solely as a transition from coal or can be known as a just transition from coal. So far, there has been moderate commitment towards achieving the provisions of Justice – Social Justice. The intended goal is for Colorado to have a just transition that centers the aspects of social justice. It is best to assess the transition by looking at coal transition communities and workers separately as efforts have been segregated into these two categories. Regarding coal transition communities, implementation efforts have been focused on integrating a framework of justice and equity. For instance, with the Community Grant Funding Program, equity and justice were taken into consideration with the development of the 13-Point Formula and Equity Formula to make sure funding is being allocated to the

communities that are most in need. Also, there has been ongoing efforts by the staff of the Office of Just Transition and the Just Transition Advisory Committee to have virtual and physical presences in the coal transition communities. There have been a variety of trips to communities with future trips planned. These efforts are crucial to building trust and rapport with the communities. If the implementors of the transition are trusted, it will make implementation efforts more efficient and effective. It should be noted though that although there have been clear efforts to keep social justice in mind, there is still extensive work to be done. Many of the coal transition communities do not trust government actors with this implementation. There have been ongoing concerns regarding transparency from the State and local governments, particularly with money from the Community Grant Funding Program. Moving forward, it will be important for the State to hold itself and local governments accountable regarding transparency to community members. Also, the State could take a stronger role in leading with a framework of social justice. For instance, with the Community Grant Funding Program, the State could make a requirement that grant applications consider equity and justice. Also, any other implementation programming should be assessed through an equity and justice lens, which has not been the standard thus far. It has appeared that social justice has been more of an afterthought, which could be a consequence of other pressures, such as securing funding, of the implementation.

Looking at coal transition workers, there are extensive efforts that must be taken to center social justice. While there have been efforts to engage coal transition workers by the OJT and JTAC, there needs to be more. Visits to coal transition communities and the coal transition worker survey have been the main actions thus far for engaging impacted workers. The coal transition worker survey that the OJT released to select coal facilities in Northwest Colorado provided important insight to worker thoughts. But there are clear signs that workers are not

receiving the communication that they need and desire. The OJT has mentioned on multiple occasions that it hopes to improve communication sources moving forward but communication has been slow, which is causing ongoing distrust from coal transition workers. Although, it should be noted that this is not entirely the fault of the OJT as the staff is doing the best it can with current capacity and resources. Engaging communities and building trust requires a long-term commitment, staff capacity, and resources that the OJT has not yet been given, so it is not surprising that coal transition workers are still not fully trustful of the State. Also, in addition to a lack of communication from the State, there has been no money allocated to coal transition workers which is causing ongoing distrust. Although the State wants to plan so that funding is spent strategically, many workers need money sooner rather than later. In the short term, it could be beneficial to provide some funding for workers to go towards specific needs such as education and training while other funding could be reserved for other needs such as loss of income and loss of health insurance. Overall, efforts for social justice for communities and workers must be improved to achieve the goals outlined in the JTAP and justice must lead to the work that is being done.

Environmental Justice. One of the most impactful discoveries of the implementation of Colorado's just transition is the complete lack of environmental justice. Due to this, there has been extremely weak commitment to environmental justice and although State leadership continues to reaffirm that environmental justice should be an overarching goal of state work. Regarding transition implementation efforts, there has frankly been a lack of acknowledgement of environmental justice, and it appears that environmental justice is not a feature of this transition.

There have been small efforts that will contribute to addressing environmental justice such as through as funding for projects that address environmental injustices in the Community Grant Program and the desire to have a subcommittee for Disproportionately Impacted Communities and Stakeholder Engagement, but these are not enough. Looking at the JTAC, there is not a strong and consistent representation for Disproportionately Impacted Communities (DICs). There are two members that are intended to represent DICs, but they do not attend or participate in any of the JTAC meetings. If these representatives consistently are not doing the duty that they committed to, they need to be replaced with representatives that will. There is no lack of people in Colorado that can represent DICs and are extremely knowledgeable on the topic of environmental justice. It can be seen by CDPHE's Environmental Justice Task Force that there are people that would be willing to represent DICs to better improve State efforts on addressing environmental justice. Also, along with the need to have actual representation of DICs in transition efforts, the OJT and CDLE in general must collaborate better with CDPHE.

Since CDPHE has been designated as the agency to lead environmental justice efforts, it is important to collaborate. There has been a lack of coordination among state agencies regarding environmental justice, which can be seen across the varying definitions of environmental justice that exist across the State. Currently, CDPHE only sees the transition from coal as a labor and economic issue. This is extremely concerning as transition efforts have many overlapping aspects with environmental justice and if state agencies worked collaboratively on these overlaps, they could be better addressed. Also, it should be noted that CDPHE currently does not recognize coal transition workers and coal transition workers as environmental justice communities although the socioeconomic implications on these workers and communities should mean that they are considered environmental justice communities and therefore require the

attention of CDPHE. These discrepancies and misalignment across the State are extremely concerning when it comes to addressing environmental justice issues. With current efforts, the implementation of Colorado's just transition will address minimal goals or desires for environmental justice.

6.6 Implications and Lessons Learned

Overall, the implementation of Colorado's just transition is progressing better than initially expected. This transition is an extremely ambitious program to be implemented by the State and one of the first of this kind. Those that have been part of the implementation thus far should be given immense praise for taking on this ambitious task. In particular, the staff at the Office of Just Transition and members of the Just Transition Advisory Committee should be given praise for breaking new ground in implementing a transition of this size. While the implementation is progressing better than initial expectations, there is still room for improvement.

Government support will be crucial moving forward so the State must stay firm in continuing to expand government support while also making stronger attempts to involve local governments and the Federal government. Also, like government support, dedicated funding streams will continue to be crucial for implementation efforts. Although there is funding secured thus far, it will not be enough. There needs to be considerable efforts to secure more funding not only from the State but also the Federal government. This funding will need to be committed to making sure that workers and communities are taken care of to the extent they need. Regarding economic diversification, it is still challenging to say whether efforts will achieve the intended goals since economic diversification and development requires long-term commitment. It will be important for the State, particularly the OJT, to continue to assess whether grant funding is being

spent efficiently and effectively for achieving economic diversification. Also, the State must ensure that spending of this funding is transparent, and communities are clear with efforts. Efforts for social justice must continue to progress and must lead efforts going forward. So far, social justice has been more of an afterthought, where strategies and actions should be designed with social justice from the start. This has occurred in some cases like with the structure of the Community Grant Funding Program but other efforts such as engaging communities and workers must be designed better with social justice as the key framework. Also, the State could help guide communities on social justice efforts by making it a framework of social justice a requirement for receiving grant funding. Lastly, there must be a complete change to how environmental justice has been thought of thus far during the transition since it has been largely excluded from implementation. Some efforts such as securing true representation for disproportionately impacted communities, coordinating with CDPHE on environmental justice, and prioritizing environmental justice in implementation can make large differences. For example, like social justice, considerations for environmental justice can be a prerequisite for communities receiving money from the Community Grant Funding Program. There are many overlaps in achieving environmental justice and what communities desire in terms of economic diversification. The State could help to prioritize environmental justice by helping communities see these overlaps and dedicated funding to these overlaps.

The implementation of Colorado's just transition provides a great case study for other transitions moving forward and it appears that there is the potential for many positive implications to come from this transition. As the rest of the United States and other countries continue a similar track to Colorado, there are sure to be many more transitions from fossil fuel sources such as coal in the future. By looking at Colorado's transition, others should be able to

better improve upon it moving forward to create better ‘just’ transitions. Some important lessons can be learned from Colorado. First, a transition needs strong governmental support. Not every transition needs an Office of Just Transition, but there needs to be a government entity such as the national government or a subnational government helping to facilitate the transition. Municipalities are not equipped with the capacity and resources to fully spur a transition themselves, especially when there are far reaching implications to a transition that span past municipality bounds. In the case of the United States, there needs to be strong support from state governments and the Federal government in facilitating and supporting transition activities. Also, another major takeaway is the importance of funding when it comes to implementing a transition. Currently, Colorado’s transition sits in a good place for funding in the short-term, but funding in the long-term is still unknown. Colorado has been fortunate in many ways with securing funding for the transition, but this might not be the case for others implementors. Implementors should proceed with caution and should figure out what the major costs of the transition will be, how much funding is needed to alleviate these costs, and how to secure the necessary funding. Another overall lesson learned from Colorado is regarding economic diversification. Economic diversification is going to be unique to every community. Efforts to create economic diversification and economic opportunities should be designed with extensive community engagement and partnership. There is no ‘one-size fits all’ for economic diversification. It is important for overarching government bodies to work directly with communities to help them achieve what they want. Implementors should not impose an idea for economic diversification onto a community if the community does not want this. Social justice is also a large highlight of Colorado’s transition. For any transition implementation, a lens of justice and equity should be applied to all the work that is being done. Including creation of a

policy, adoption of said policy, and implementation of the policy. Policymakers and implementors needs to be open to listening and engaging with affected workers and communities. Without a lens of justice and equity, there is the potential to create an unjust transition. Lastly in the case of transitions, environmental justice should not be overlooked. While some might see just transitions as solely a social justice issue, there are wide reaching environmental justice issues tied to transitions and by using a framework for just transitions, those injustices can be alleviated. Although Colorado's transition is still in its early years, as of 2023, there are signs to be cautiously optimistic for what this transition can do for coal communities and workers moving forward. There is still much to be done, but if the State continues what it is doing well and improves on other aspects, there is potential for this to be a 'just' transition.

CONCLUSION

In 2019, the State of Colorado adopted one of the first just transition policies in the world. This policy was adopted to commit the State to transition from coal as a fossil fuel source by 2030. With this policy, the State made a moral commitment to coal transition communities and coal transition workers to not “leave them behind” during this transition (“Just Transition Action Plan” 2020). This means the State made a commitment to justice as a framework for moving from fossil fuel sources to achieve emission reduction and climate goals. The goal of this thesis was to evaluate Colorado’s just transition policy in terms of its provisions and implementation utilizing the research questions - 1) – *What are the provisions of Colorado’s just transition policy; and 2) does its implementation weaken, reproduce, or strengthen the outlined provisions?*

Colorado’s just transition policy is one of the first of its kind, both in terms of its adoption and implementation. With the adoption, the State sought to outline various provisions for this just transition. The Just Transition Action Plan (JTAP) became the guiding framework for achieving these provisions through a variety of strategies and actions. The JTAP showed commitment towards governmental support, dedicated funding streams, economic diversification, social justice, and environmental justice for Colorado’s just transition.

In 2021, the State of Colorado began its implementation of the just transition policy as guided by the JTAP. The implementation of Colorado’s just transition policy has shown that there are signs to be cautiously optimistic about the ability for this implementation to create a just transition. There has been strong commitment for short-term governmental support and short-term dedicated funding streams along with moderate commitment for long-term

governmental support, long-term dedicated funding streams, short- and long-term economic diversification, and social justice. While there have been important efforts thus far, there is still room for improvement, especially regarding commitments to environmental justice. When implementation can show a strong commitment to all pillars of just transition, it will be clear that Colorado's just transition from coal will be successful. With the current progress, there is potential to achieve the goals laid out for Colorado's transition and thus create a successful "just" transition.

It is important to note, that if implementors do not learn from current efforts and work to better improve the implementation of Colorado's just transition, there could be many social and environmental justice implications, specifically for coal transition communities and workers. It is important to always recognize that improving the wellbeing of these communities and workers should be at the forefront of the work being done and that if efforts are not doing such, they must be adjusted. Moving forward, it will be important for implementors, specifically the State, to center work more closely with principles of social and environmental justice.

Moving forward, there are vast lessons to be learned from Colorado's just transition. One of the largest takeaways should be the importance of centering work in social and environmental justice. If a transition truly seeks to be "just," social and environmental must be the guiding principles for decisions. Also, a just transition requires extensive capacity and resources. Capacity must be supported on multiple levels ranging from the public sector to the private sector. With the public sector, it is crucial that government institutions lead and support the transition as they are best poised to support the needs that arise from this type of transition. Along with capacity, resources are crucial, mainly financial resources. Transitions such as

Colorado's will require extensive funding resources. Without dedicated funding, there is the potential to create numerous negative implications.

The lessons from Colorado can help to inform the implementation of other just transitions and future research. As this thesis was completed, further questions around the implementation of Colorado's transition continued to arise, showing there are continued facets of this transition to be researched and this thesis just glazed the surface. The hope is that research on just transitions continues so that just transitions can be implemented across the world to improve the wellbeing of people and the planet. In the future, as just transitions are implemented and researched, Colorado should never be forgotten as being one of the first in the world to break new ground on the implementation of just transitions.

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