

Fossil Fuel Transition Study

Debrief

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Office of Economic Development

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Community Attributes

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City of Seattle

Agenda

- Introduction
- Key Industry and Workforce Development Team Overview
- Fossil Fuel Study
 - Timeline and Approach
 - Methodology and Definitions
 - Study Findings
 - Study Recommendations
- Next Steps
- Q/A



Key Industry and Workforce Development Team

Workforce Team Role

- Invest in preparing our workers for the current economy and future of work
- Work to extend system capacity and build network of support for jobseekers
- Support equitable hiring initiatives



Sasha Gourevitch,
Youth Employment Development Advisor

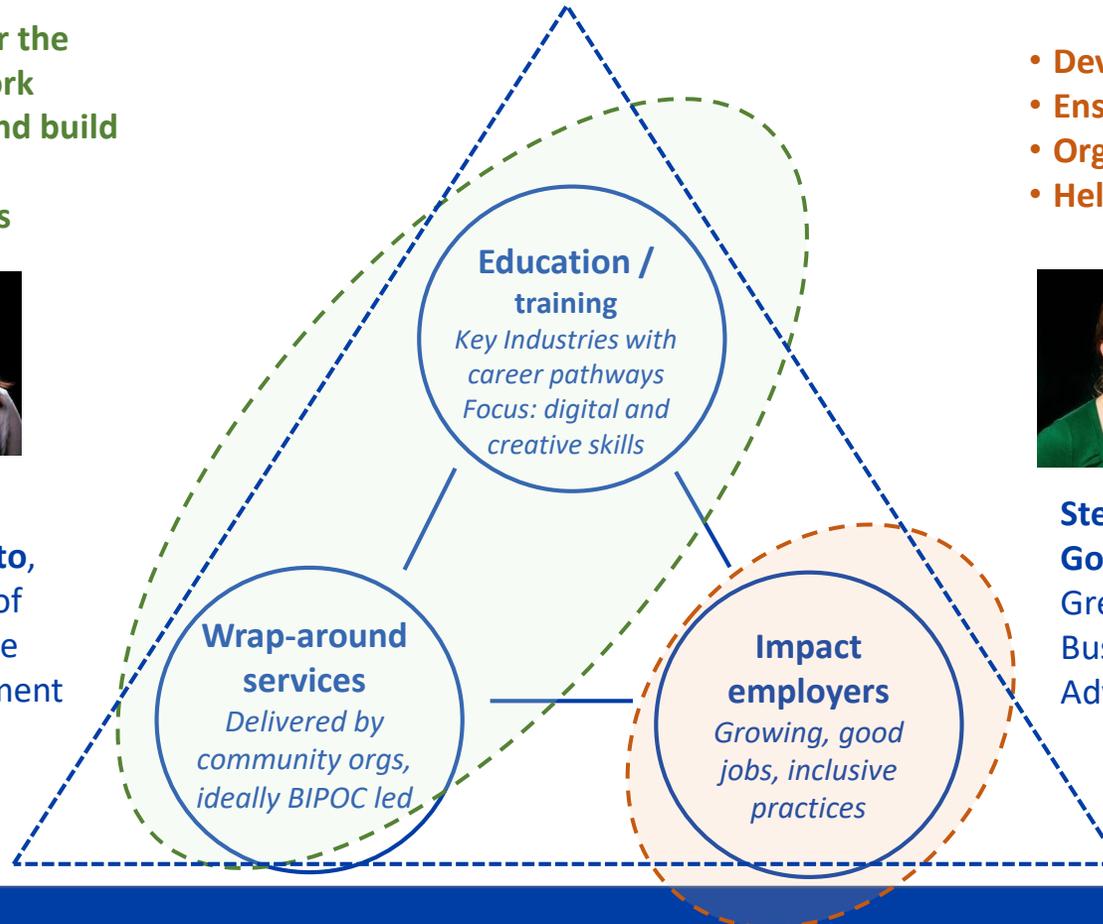


Matthew Houghton,
Workforce Development Advisor



Nancy Yamamoto,
Director of Workforce Development and Key Industry

TEAM'S GOAL: Equitable Economic Recovery



Key Industries Team Role

- Develop relationships and expertise
- Ensure that inclusive businesses are growing
- Organize businesses around shared problems
- Help businesses commit to inclusion



Stephanie Gowing,
Green Business Advocate



Sarah Scherer,
Maritime and Manufacturing Advocate



Anisa Khoshbakhtian
Technology and Media Industry Advocate

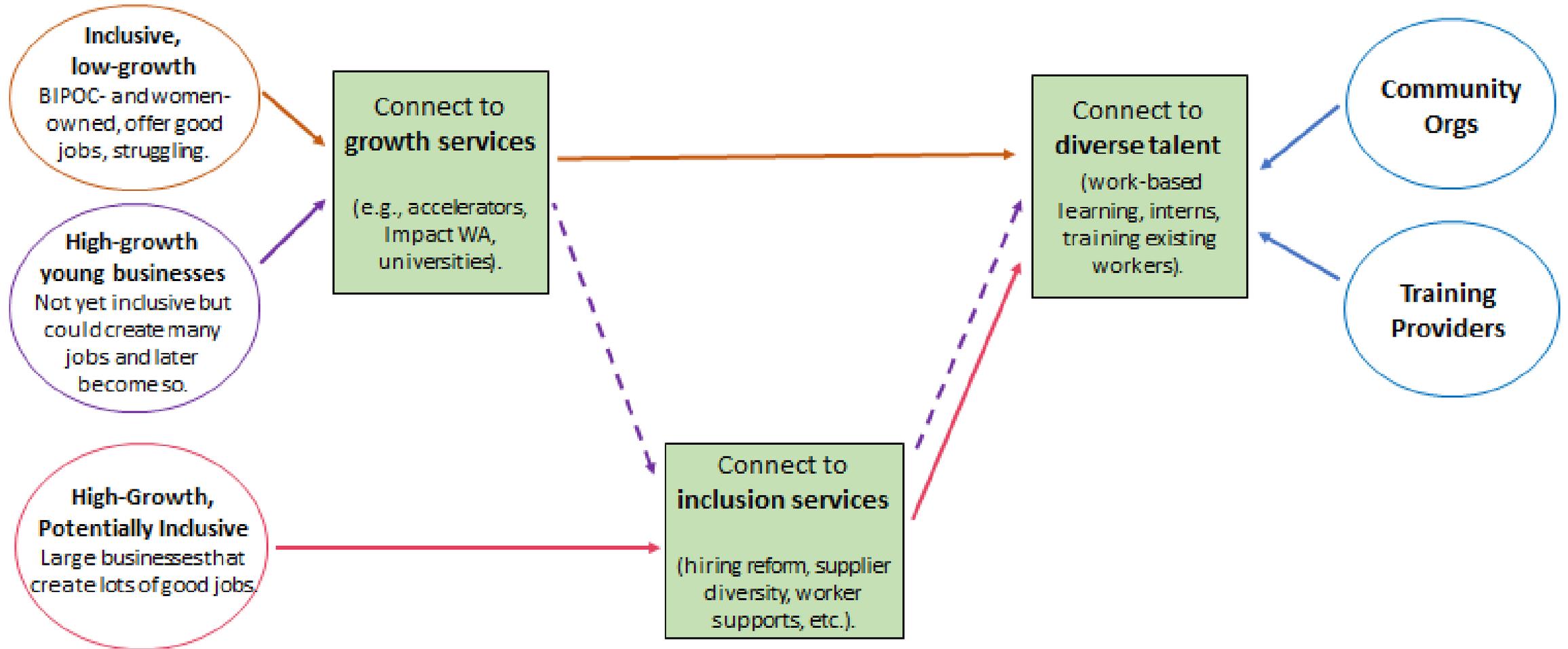
Key Industries Team

Workforce Development Team

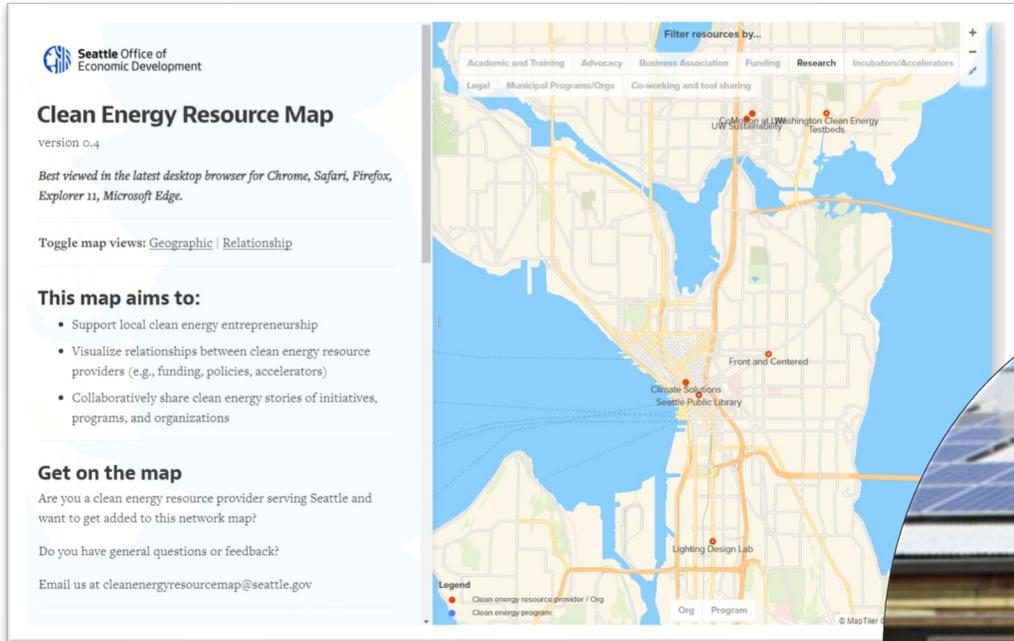
Help inclusive firms grow

Help growing firms become inclusive

Connect diverse talent to impact employers



Supporting our Clean/Green Economy



Resources on the Clean Energy Map



Growth Services

- Coaching
- Capital
- Connections

Inclusive Services

- People
- Practice
- Procurement

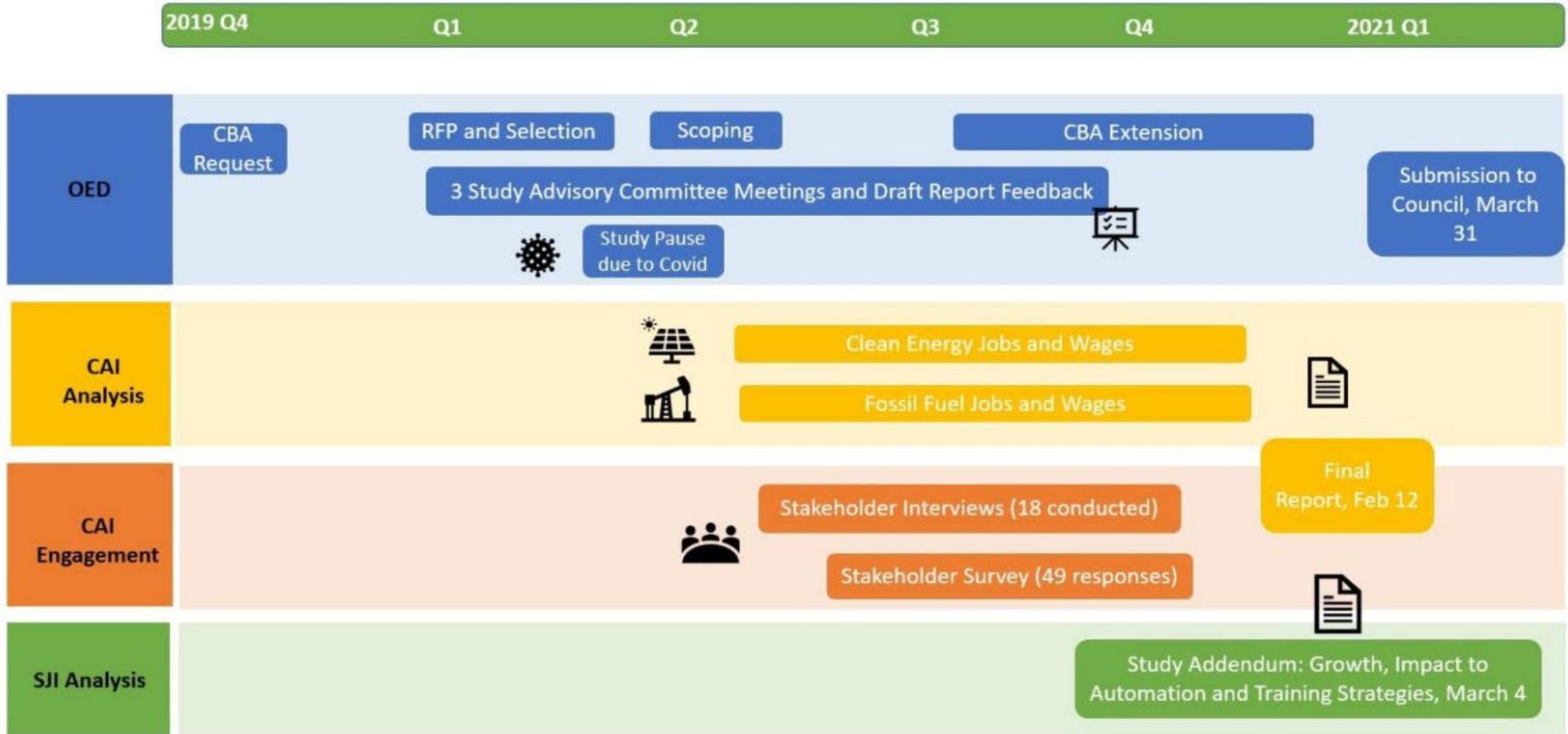
Workforce Development

- Youth
- Adult

Request from Council (Q4 2019)

- An analysis of jobs and wages of those directly employed by the fossil fuel industry as well as related industries, such as pipefitters, natural gas appliance businesses and auto mechanics;
- A forecast of regional job growth in clean energy and related industries;
- Interviews and/or focus groups with key stakeholders, including labor unions, workforce training providers and small business owners; and
- Recommendations for strategies that the City and its partners can implement to:
 - a) ensure a just transition for workers, with a particular focus on how to equip workers with the necessary skills to move from jobs reliant on fossil fuels to jobs in the clean energy sector;
 - b) accelerate and expand job growth in the clean energy sector, if necessary; and
 - c) ensure that jobs created are family-wage jobs.

Fossil Fuel Study Approach and Timeline



Study Scope

- **Define the industry.** Fossil fuel and clean energy industries.
- **Produce the metrics.** Jobs, wages and demographics.
- **Occupation analysis.** Identify fossil fuel and clean energy reliant occupations.
- **Stakeholder input.** Conduct stakeholder outreach, including interviews with stakeholders and employer survey.
- **Advisory Committee Review.** Meet with Advisory Committee to review progress, findings and request input.
- **Recommendations and strategies.** Develop recommendations for strategies that the City and its partners can implement.

Study Methodology and Definitions

Fossil Fuels

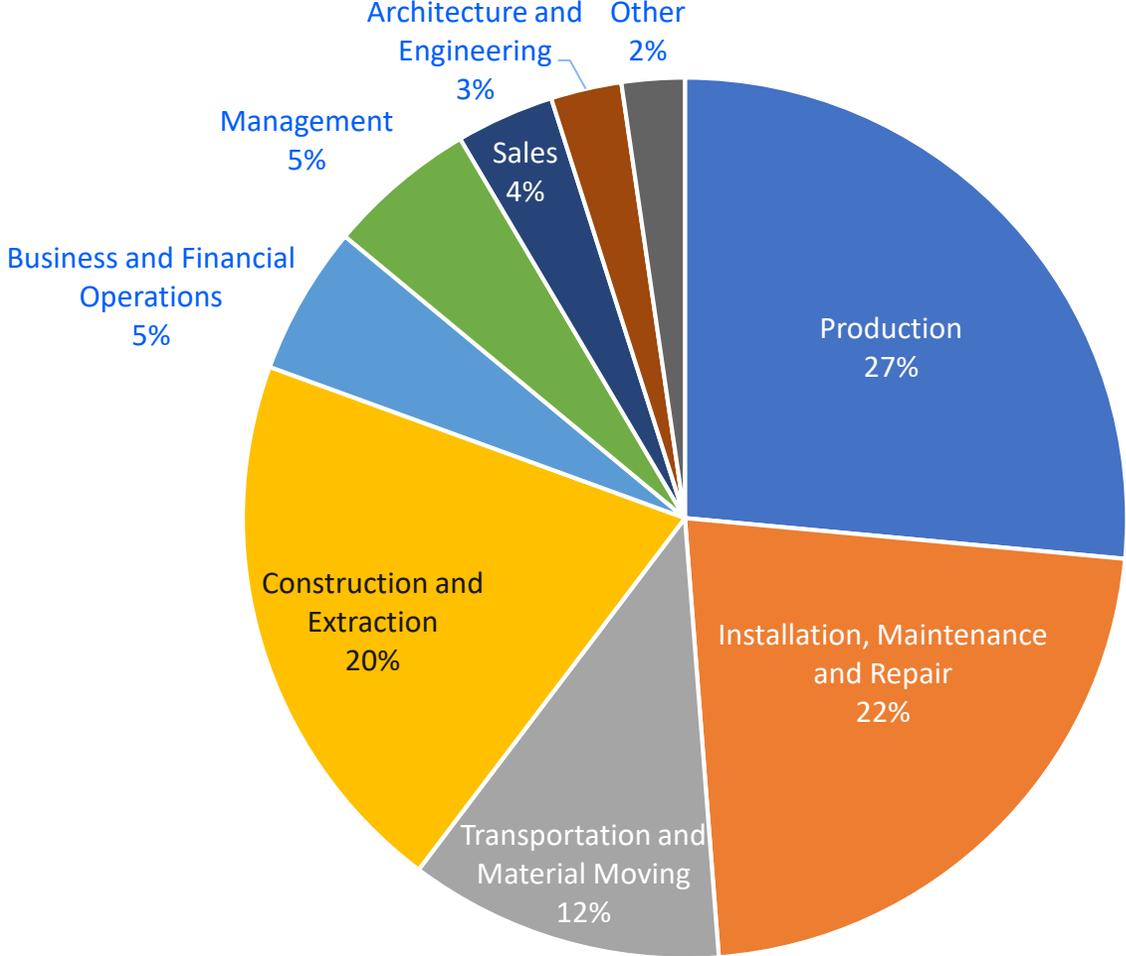
- Defined based on a July 2020 MIT research
- Includes fossil fuel related activities and businesses like internal combustion engine vehicles (ICEs), manufacturing and its supply chain, fuel distribution and repair and maintenance of ICE vehicles
- Most common occupations include miscellaneous assemblers and fabricators, construction laborers, and automotive service technicians and mechanics

Fossil Fuel Industry Jobs in King County, 2019

Subsector	Jobs
Automotive Mechanical and Electrical Repair and Maintenance	2,510
Utility System Construction	2,050
Motor Vehicle Manufacturing	1,240
Semiconductor and Other Electronic Component Manufacturing	620
Motor Vehicle Parts Manufacturing	380
Petroleum and Petroleum Products Merchant Wholesalers	360
Agriculture, Construction, and Mining Machinery Manufacturing	210
Motor and Generator Manufacturing	80
Motor Vehicle Body and Trailer Manufacturing	90
Petroleum and Coal Products Manufacturing	70
Electric Power Generation, Transmission and Distribution	50
Total Fossil Fuel Jobs	7,660

Sources: Washington State Employment Security Department, 2020; Griffith, Calisch, & Laskey, 2020.

Fossil Fuel Occupational Groups



Study Methodology and Definitions

Clean Energy

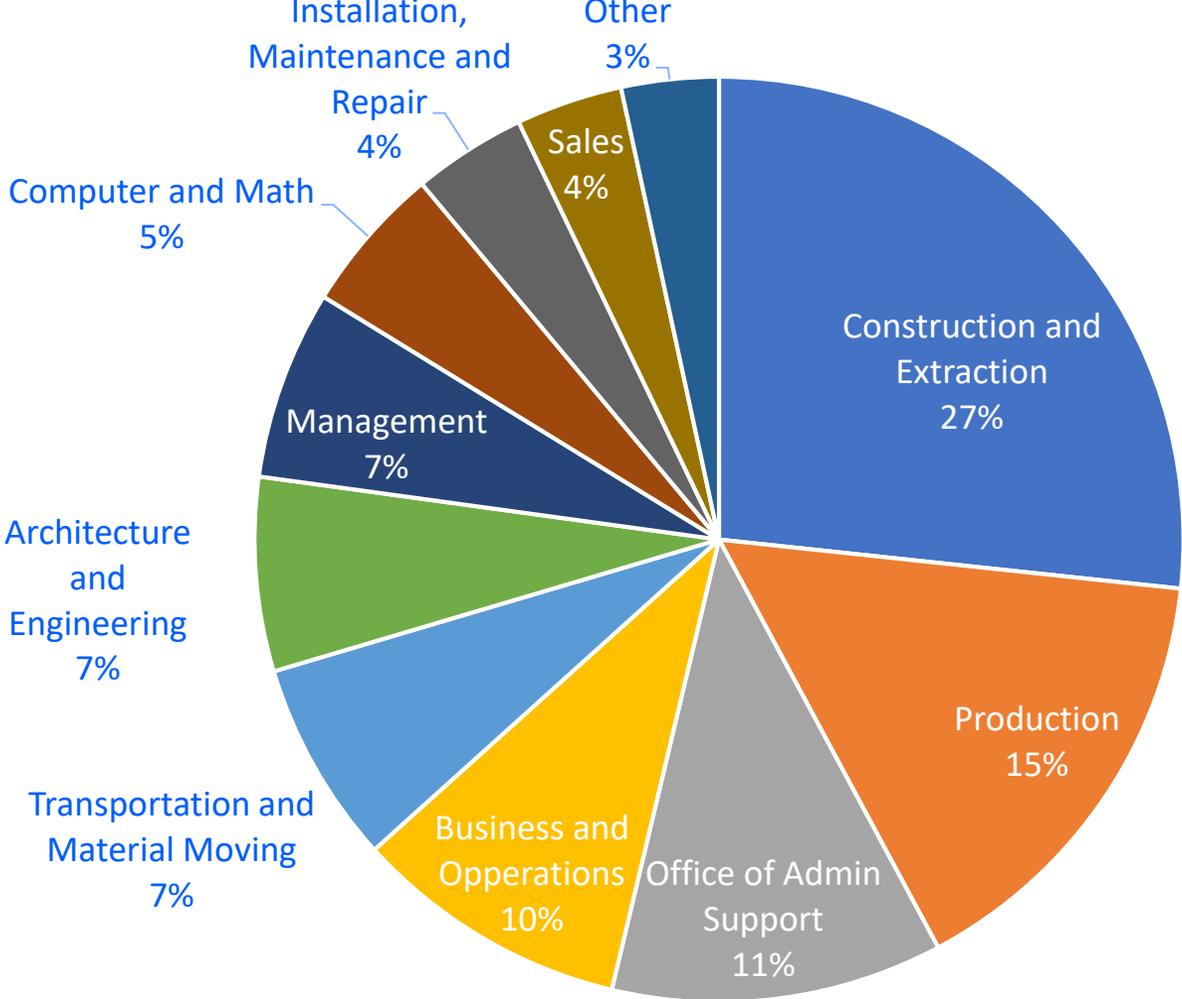
- Defined based on a 2019 Brookings report ('core' industries)
- Additional research included businesses whose activities are partly clean energy related ('Other industries and businesses')
- Most common occupations include construction-related occupations such as construction laborers, operating engineers and other construction equipment operators, and first-time supervisors of construction workers.

Clean Energy Industry Jobs in King County, 2019

Industry	Jobs
Specialty Trade Contractors	3,270
Electric Power Distribution	1,530
Other Electronic Component Manufacturing	1,090
Motor Vehicle and Parts Manufacturing	580
All Other Miscellaneous Electrical Equipment and Component Manufacturing	370
Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	350
Electric Bulk Power Transmission and Control	150
Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use	140
Hydroelectric Power Generation	120
Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	110
Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	80
Heating Equipment (except Warm Air Furnaces) Manufacturing	60
Storage Battery Manufacturing	30
Current-Carrying Wiring Device Manufacturing	30
Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing	30
Motor and Generator Manufacturing	20
Other industries and businesses	4,400
Total	12,400

Sources: Washington State Employment Security Department, 2020; Griffith, Calisch, & Laskey, 2020.

Clean Energy Occupational Groups



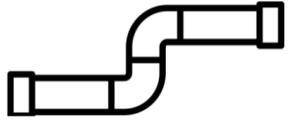
Key Findings

- Clean energy industry has experienced **rapid growth** in recent years and has a positive outlook statewide.
- There are **1.6x more clean energy jobs** (12,400) than fossil fuel jobs (7,600) in King County and clean energy occupations identified in the study are forecast to **grow an average of 6%**.
- Additionally, a **greater number and a greater proportion of jobs in clean energy industries** are in job categories that **provide median wages greater than the area's median wage of \$69,000**.
- Both the fossil fuel and clean energy sectors **lack gender and racial diversity in the highest paid occupations**.

Additional Takeaways



Some fossil fuel occupations, such as **pipelayers who currently rely on fossil fuel dependent skills, will need job training and transition support** for specific occupations where there is transferability of knowledge and skills into new careers such as water-related systems.



Two of the most at-risk occupations impacted by automation are freight laborers and construction laborers. Both occupations have a large percentage of workers of color, particularly Latinx/Hispanic. In contrast, most of the occupations, particularly the "good jobs," are disproportionately held by white workers.



The **electrification of the transportation system** will impact fossil fuel workers differently depending on the transferability of knowledge and skills.

Employment is expected to increase in construction and building trades due to an increased demand for electrification, efficiency improvements, building modifications and equipment installation.



Businesses in the fossil fuel and clean energy industries both **rely on similar professional support** activities for various administrative, legal, financial and businesses services.

Themes We Heard from Stakeholders

"Career Maps?
Incentives?"

"Lead policies
tht create large
bodies of work
by heavily
impacted
sectors"

"Make sure that ANY
and ALL jobs that
are "created" come
tied to a REAL
LIVING WAGE
pathway! SKILLED
Craftspeople hold
licenses for a
REASON! "

"A mistake we
make on
transition-
focusing directly
on impacted
workers. We miss
broader impact"

From Clean Energy Sector

- We need well trained/skilled and diverse employees
- Decarbonizing single family residential sector is a great opportunity
- Explore public-private partnership opportunities

From Fossil Fuel Sector

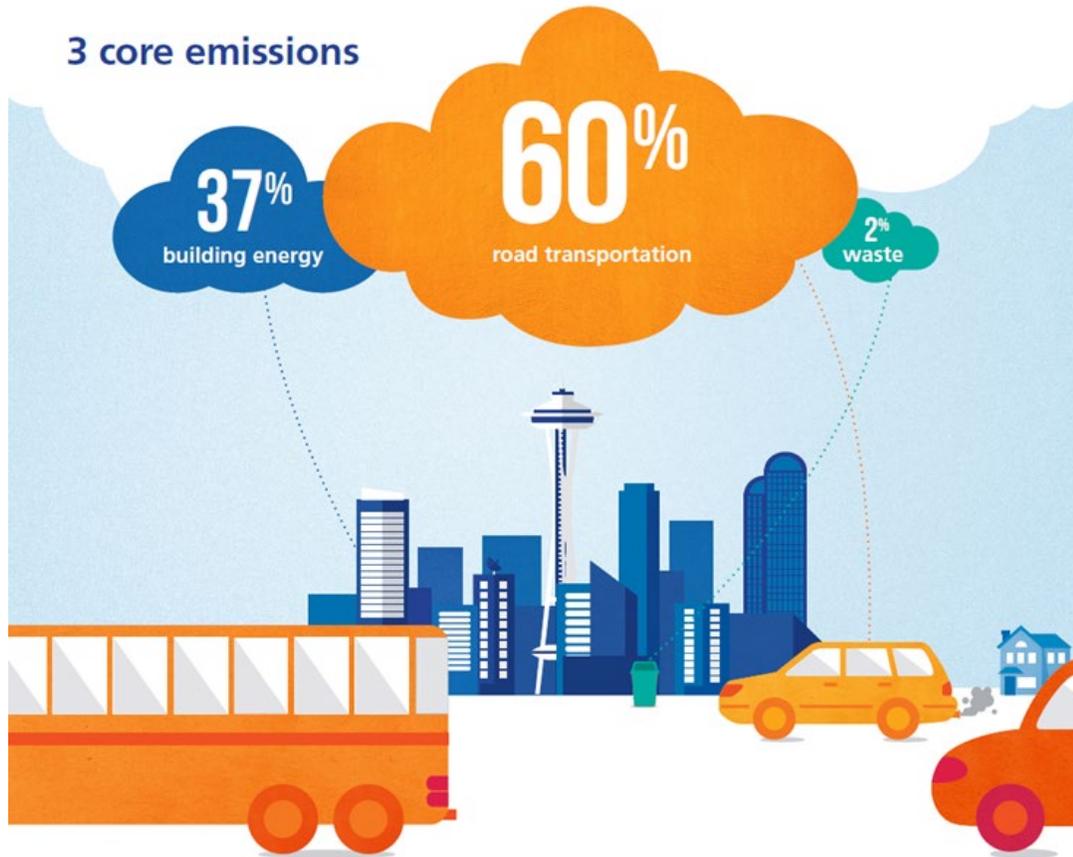
- Create and fund a transition plan
- Consider energy conservation's role
- Think multi-jurisdictional

Study Recommendations

- Policies to prioritize demand-side clean energy strategies
- Affected workforce and stakeholder engagement
- Business expansion support targeting clean energy supply-side strategies



Proposed Next Steps



Green New Deal Executive Order/ Interdepartmental Team

Strengthen pathways to economic opportunity for those workers most impacted by the transition to a clean economy.

Convene training partners to prioritize career and outreach strategies for the most impacted at-risk occupations.

Continue to **engage with clean energy companies** to gain feedback on/raise awareness of relevant business support services.



Questions?