



Revenue Recycling Choices and their Effect on Decarbonization

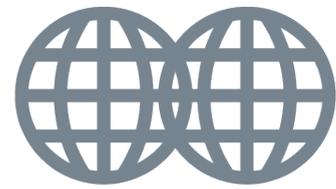
Bansari Saha
Senior Director, Economics

March 12, 2020

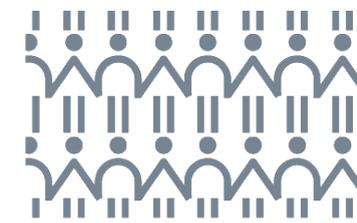
Outline

- **Who is ICF?**
- **Decarbonization efforts**
 - Current status
- **How to get there**
- **Various options for revenue recycling**
 - Investment options
 - Direct assistance
 - Other options
- **Concluding thoughts**

A Growing, Global Company **Since 1969**



Global professional,
technology and
marketing services firm

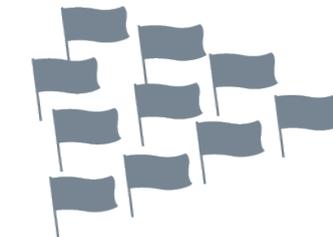


Over
7,000 People

Headquartered in Fairfax, Virginia with:



70 Offices



80 Nationalities

\$1.45B In annual
revenue



Speaking more than
70 Languages



Our **Expertise**



Government



Transportation



Energy



Education
& Social Programs



Consumer



Retail



Environment



Hospitality



Health

Our **Clients**

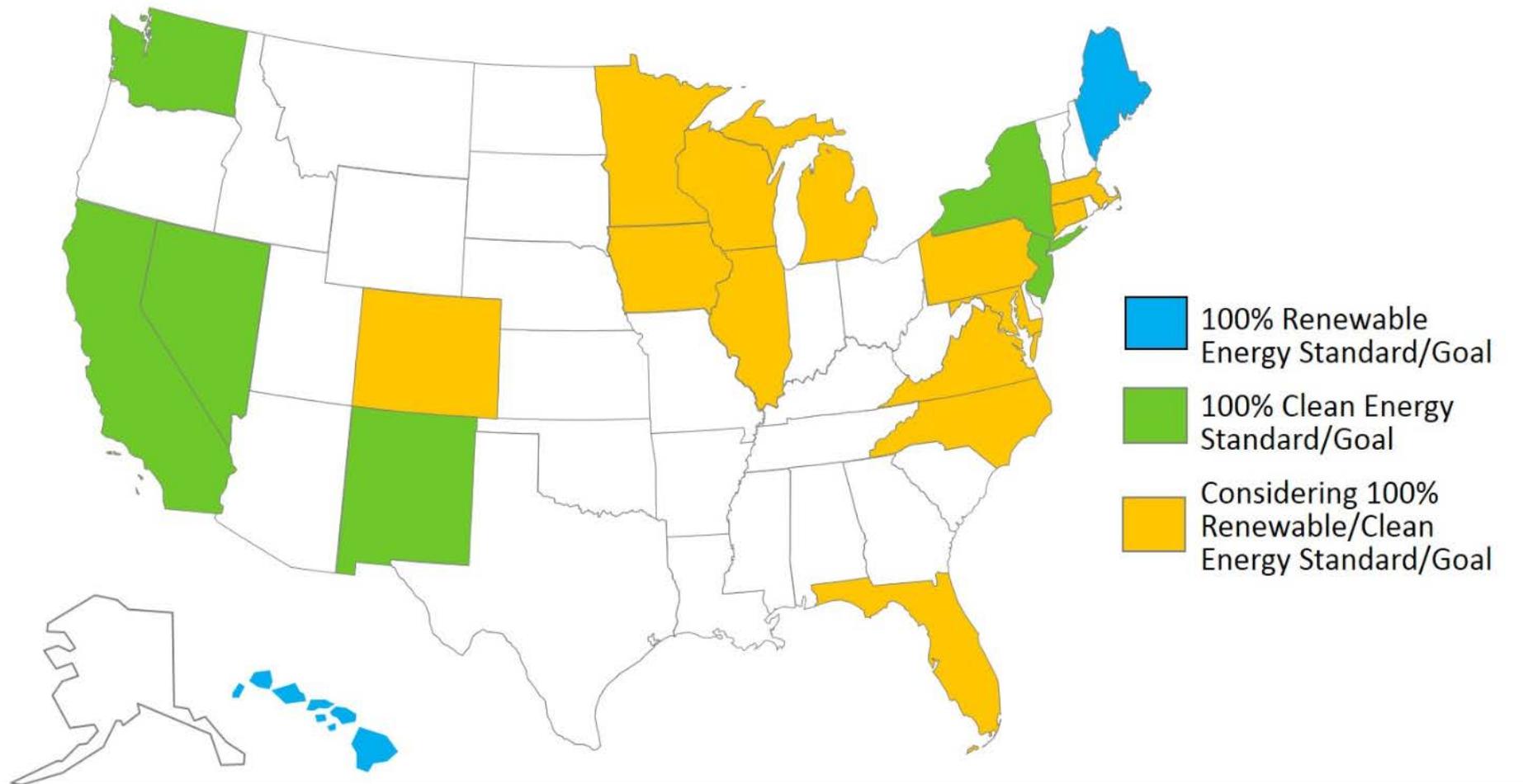
- Fortune 100 Companies
- Leading consumer brands
- 50+ top U.S. utility companies
- Most U.S. Federal agencies
- International, state and local governments
- 9 of the top 10 U.S. hub airports



Examples of Different Decarbonization Actions

100% Renewable or Clean Energy Standards/Goals

- 21 States (+DC) have GHG emissions targets
- 8 states (+DC) have 100% RE targets



Source – UCS <https://blog.ucsusa.org/jeff-deyette/states-march-toward-100-clean-energy-whos-next>

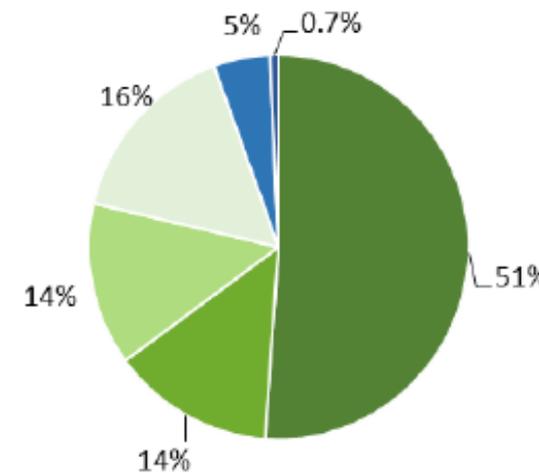
Need for a Carbon Price

- **Why is pricing carbon important?**
 - Effective policy lever to achieve decarbonization
 - “Internalize the externality”
- **Provides the incentives needed to affect change**
 - Porter Hypothesis
- **Generates revenue that can be directed effectively**
 - Targeted revenue recycling can effectively mitigate impacts

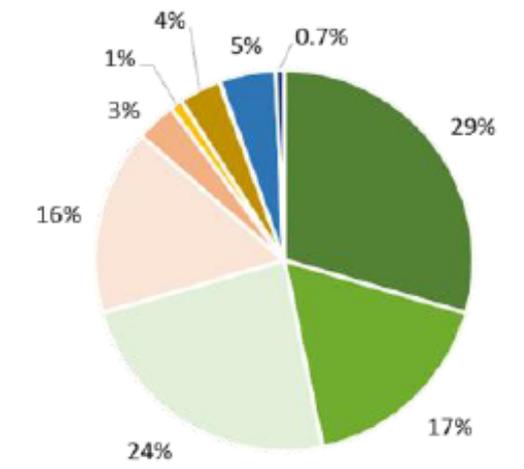
Various Revenue Recycling Options

- **Invest in reducing GHGs**
 - Complementary policies in cap-and-trade programs
- **Help low income residents facing higher energy bills**
 - Direct (energy bill) assistance
- **Help dislocated workers**
 - Provide workers retraining/rehiring incentives
- **Reduce other distortionary taxes**
 - Income tax
- **Reduce budget deficits**
 - Money goes to the General Fund
- **These options, except reducing deficits, should help the decarbonization process**

Charts 2 and 3: 2017 RGGI Investments by Category and Recipient



- Energy Efficiency
- Clean & Renewable Energy
- GHG Abatement
- Direct Bill Assistance
- Administration
- RGGI, Inc.



- Residential
- Business
- Municipal, State, & Community
- Low-Income
- General Rate Relief
- Research & Technology Development
- Clean Transportation
- Administration
- RGGI, Inc.

16 RGGI states invested \$315.6MM in 2017.

Source – RGGI, Inc



Investment Options

- **Invest in Energy Efficiency**
 - Low hanging fruit
 - Easy to implement
 - **Incentivize additional Clean and Renewable Energy**
 - Distributed solar
 - Small scale wind
 - Anaerobic biogas digesters
 - Energy storage options
 - **Invest in Clean Transportation**
 - Incentivize EV purchases and/or charging infrastructure
 - Some states focus on improving public transport options
 - **Other GHG abatement measures**
- **Creates jobs and helps with meeting decarbonization goals**

Options for Direct Financial Assistance

▪ **Direct Energy Bill Assistance**

- Provides direct assistance to compensate for higher energy bills
- Could target low income residents or all residents
- Tends to have more progressive effects on residents

▪ **Reducing Other Taxes**

- Could help reduce distortionary income tax
- Tends to be politically more palatable
- But is usually less progressive
- Tax interaction effect – could help though the causality/effect is uncertain

▪ **Overall, these choices make decarbonization less expensive for affected groups**

▪ **But, likely to have lower employment impacts than investment options**

Recycling Choices Under RGGI

- Most states invested in EE

- But enough variability depending on state's goals

Proceeds Investments Allocation

- Table represents current shares for state-level investment by categories used in the REMI modeling

State	Electric EE	Fossil Fuel EE	Clean & Renewable Energy	GHG Abatement & Climate Change	Direct Bill Assistance	Admin/ Other	Total
Connecticut	4%	65%	23%	6%	--	1%	100%
Delaware	50%	20%	5%	15%	5%	5%	100%
Maine	--	74%*	--	--	19%*	7%	100%
Maryland	25%*	--	10%	10%	50%	5%	100%
Massachusetts	92%	--	--	5%	--	3%	100%
New Hampshire	7%*	3%*	--	--	88%*	1%	100%
New York	35%	20%	20%	13%	--	12%	100%
Rhode Island	50%	--	40%	--	--	10%	100%
Vermont	--	98%	--	--	--	2%	100%

*Reflects percentages from the MRPS policy case.

Source -- https://www.rggi.org/sites/default/files/Uploads/Program-Review/12-19-2017/REMI_2017_12_19.pdf

Options to Help Dislocated Workers

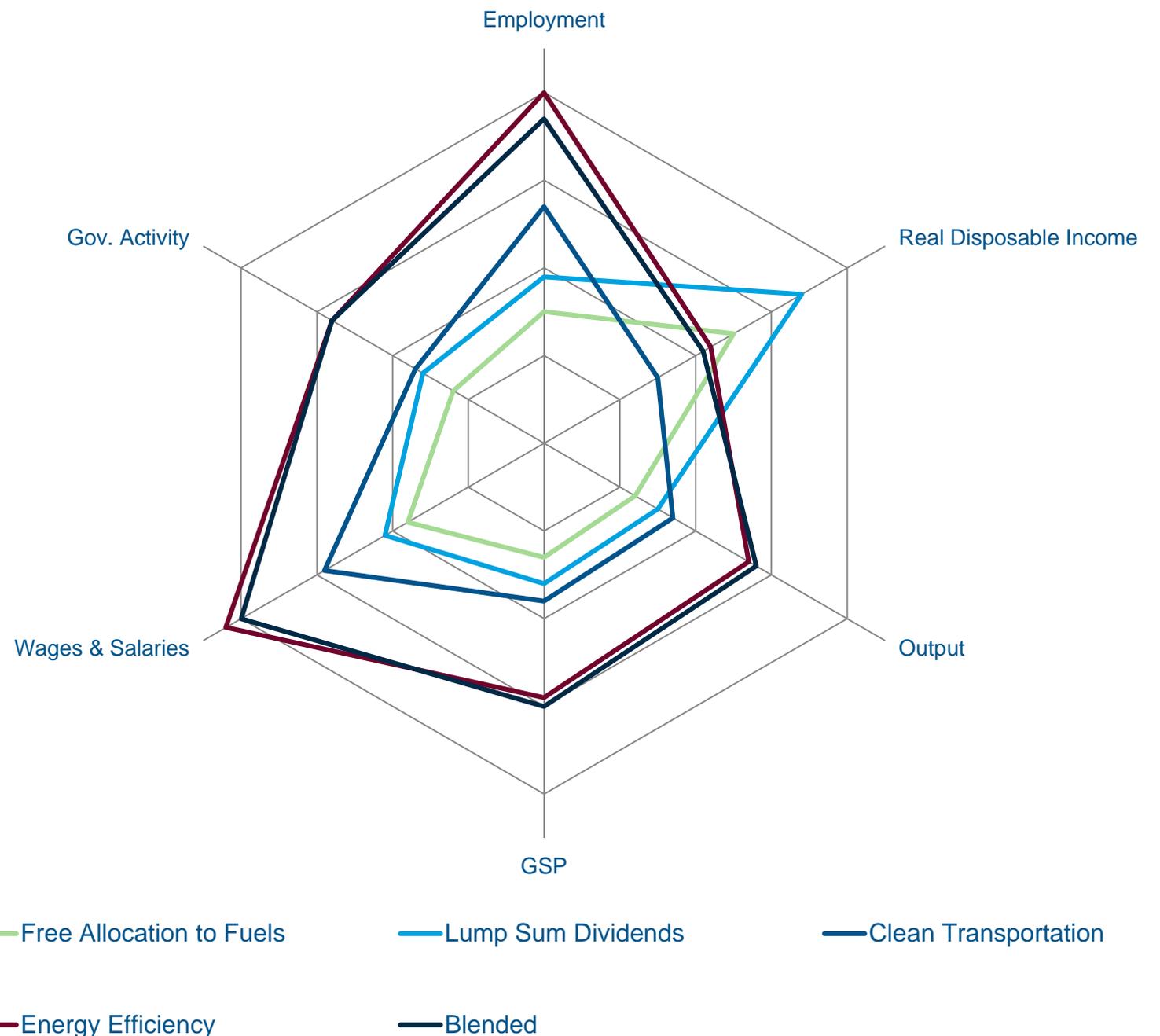
- **Could be useful in states where the fossil fuel industry has a large presence**
- **Help workers transition from fossil jobs to clean energy jobs**
- **Usually a two-pronged strategy**
 - Retrain/Upskill dislocated workers
 - Provide hiring incentives to companies
- **Targeted assistance where needed**
- **Does not seem to be popular with policymakers**

Other Revenue Recycling Options

- **Put revenues into the General Fund**
 - Funds can be used to meet budgetary demands
 - Could use the money to pay for education, housing, anything else
 - Reduce budget deficits, if warranted
- **Free allocation to sectors**
 - Usually done under a cap-and-trade type program
 - Provide relief to sectors facing high costs – fossil fuel production
 - Least efficient way to use the funds but could be needed in certain situations
- **Options are least likely to create jobs or provide additional emission reductions**

Conclusion

- **Relative efficacy of a recycling scenario depends on the evaluation criteria**
 - If goal is to have the largest job impacts, investment scenarios perform better
 - Distributing funds to consumers (Dividends) or fuels related businesses (Free allocation) leads to higher incomes for those groups
 - Dividends tend to help the low-income groups and Free allocation tends to help upper income groups
- **Choosing the appropriate reinvestment avenue should thus depend on the ultimate goal for policymakers**



Thank You!

Questions?

Bansari Saha
Bansari.Saha@icf.com
617-250-4286

