

WA Carbon Taxes

Case Study

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Case Study: WA State

- 2012: Gov. Jay Inslee wins election on a clean energy platform.
- 2013-2015: Multiple efforts fail the Republican-led Senate.
- 2015: Executive Order for a Cap-&-Trade Scheme
- 2016: Voters reject Initiative-732, Carbon Tax
- June 2017: WA Business Alliance asked to draft a carbon policy for an initiative



Sen Guy Palumbo (D) Maltby, WA



Rep. J.T. Wilcox, 2nd Legislative District

About Washington Business Alliance (WBA)

- Aiming at a solution appealing to the business middle
- More experience than any WA based group in carbon policy development
- I-732 (DG in early days)
- SB 5735 = only carbon bill ever sponsored by a Republican (Sen. Ericksen)
- Extensive engagement with power sector, PUDs
- Well-connected and respected with legislature, both Rs and Ds
- Carbon Explorer model serves as reliable, state vetted analysis tool
- Source of policy information
- Working carbon as part of a long term broadly based strategic plan for Washington = [PLAN Washington](#)

Constraint #1: WA Political makeup

June 2017

| | Democrat | Republican |
|--------------------------|-----------------|-------------------|
| Governor | Jay Inslee | |
| State Senate | 24 | 24 + 1 ind. |
| State Legislature | 50 | 48 |

Nov 2017

| | Democrat | Republican |
|--------------------------|-----------------|-------------------|
| Governor | Jay Inslee | |
| State Senate | 26 | 23 |
| State Legislature | 50 | 48 |

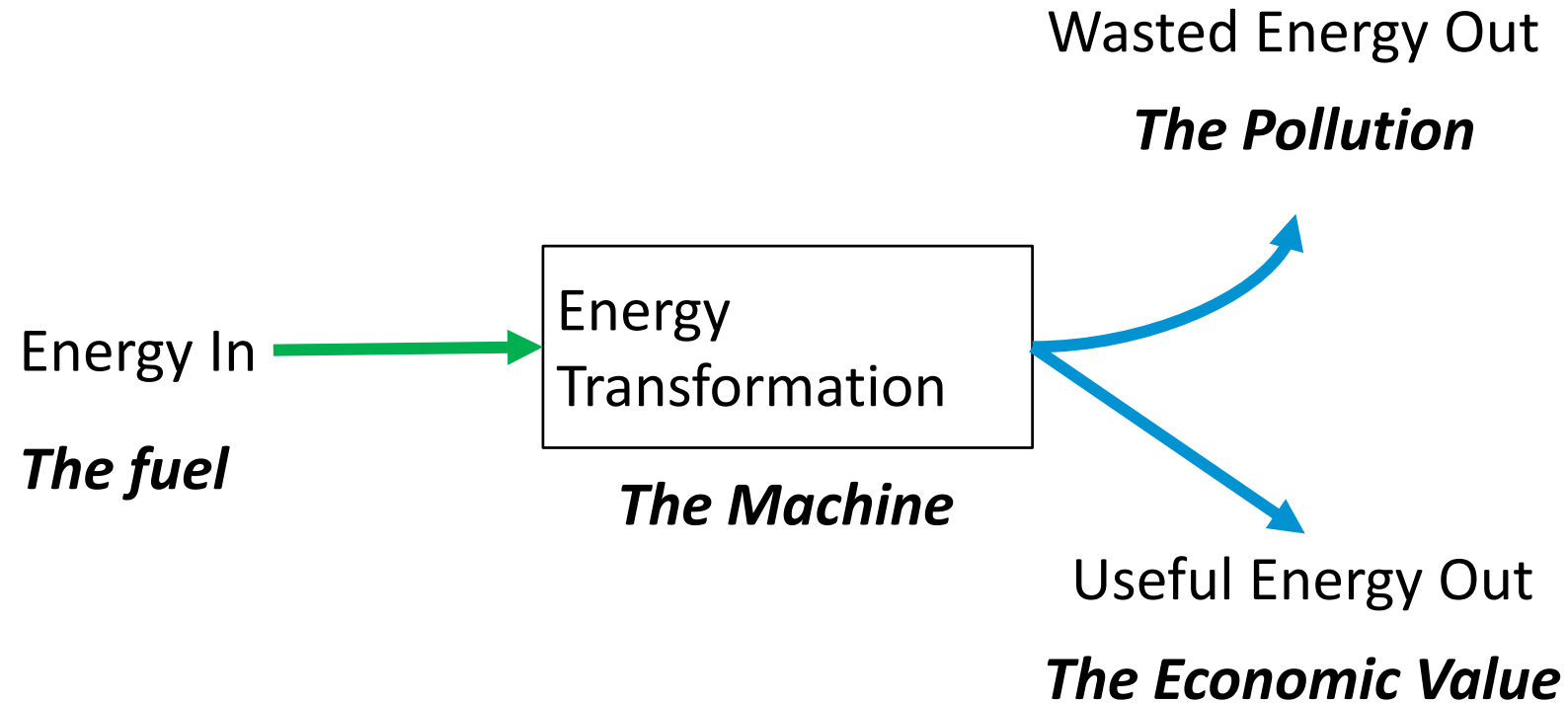
Constraint #2: 60-day legislative session

- WA has a part-time legislature.
- Every biennium:
 - Year 1 “Long Session”: 6-month session to pass a \$80B budget (2-yr cycle)
 - Year 2 “Short Session”: A 60-day session to do work
- In the 2017, Long Session, the Republicans held up passage of a Capital Budget, with the Legislature adjourning in June.
- Therefore, in the 2018 Short Session, the Legislature needs to pass the Capital Budget among other priorities.

Constraint #3: Threat of an Initiative

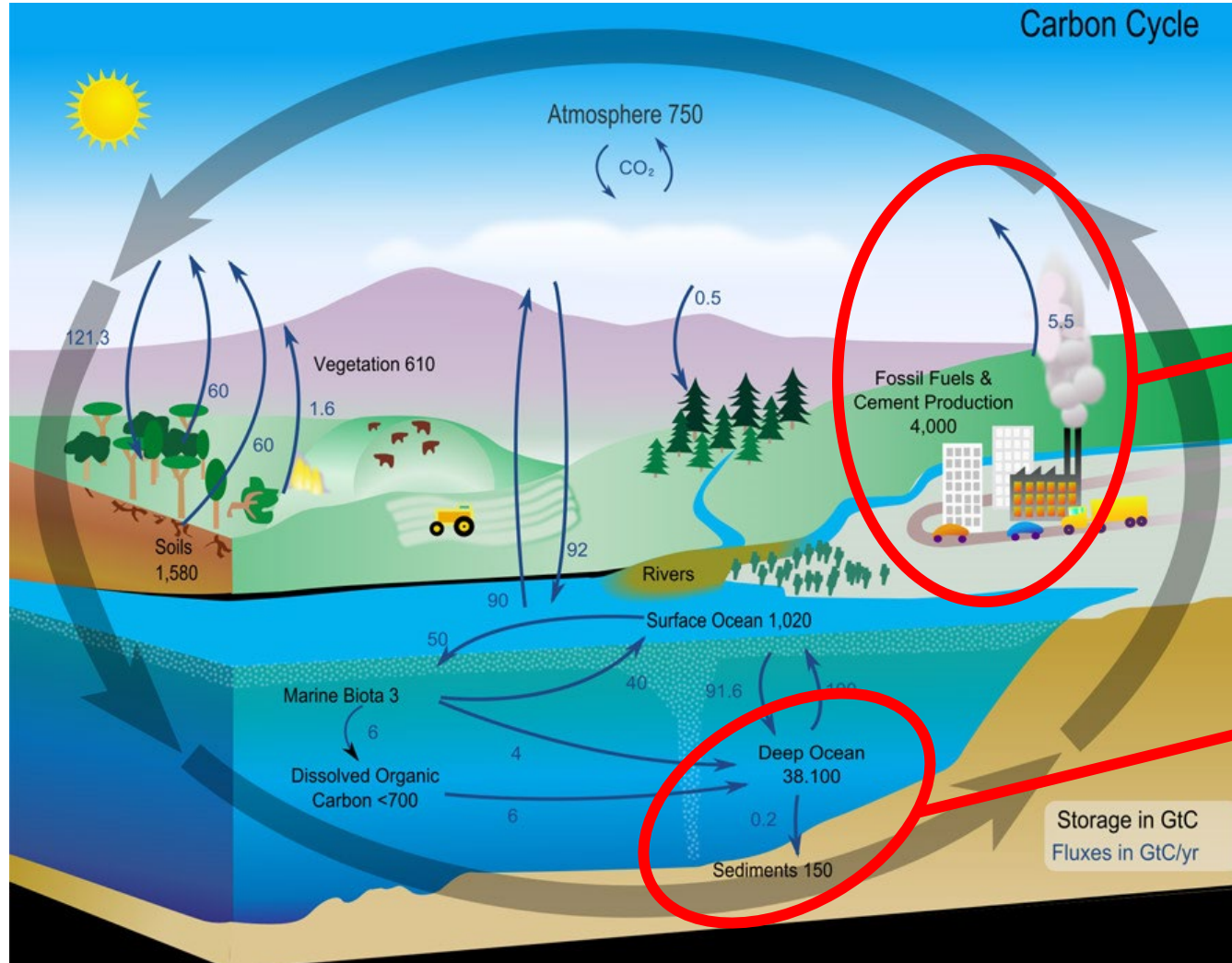
- 2016: two competing carbon tax initiatives (both failed)
- 2018: Environmental groups have raised enough money for another ballot initiative, if a carbon tax is not implemented

What's Energy?



What's Carbon?

More is released than is absorbed



5.5 GtC/Yr
Produced by
fossil fuels

0.2 GtC/Yr
Absorbed into
geology

What are Carbon *Equivalents*?

- CO₂e is the equivalent amount of CO₂ that needs to be released.
- Global Warming Potential (GWP) – Time-integrated factor of warming

| GWP | Lifetime (years) | GWP | |
|--|------------------|----------|-----------|
| | | 20 years | 100 years |
| <u>Methane</u> | 12.4 | 86 | 34 |
| <u>HFC-134a (hydrofluorocarbon)</u> | 13.4 | 3790 | 1550 |
| <u>CFC-11 (chlorofluorocarbon)</u> | 45.0 | 7020 | 5350 |
| <u>Nitrous oxide (N₂O)</u> | 121.0 | 268 | 298 |
| <u>Carbon tetrafluoride (CF₄)</u> | 50000 | 4950 | 7350 |

What are Taxes?

- Raise revenue → income tax, excise tax, sales tax
- Change behavior → cigarette tax
- Allocation of capital → Public spending priorities

Nexus of energy, carbon and taxes



Wasted Energy Out

Cap & Trade Policy

Energy In

Excise Tax

Energy Transformation

Business & Occupation Tax

Useful Energy Out

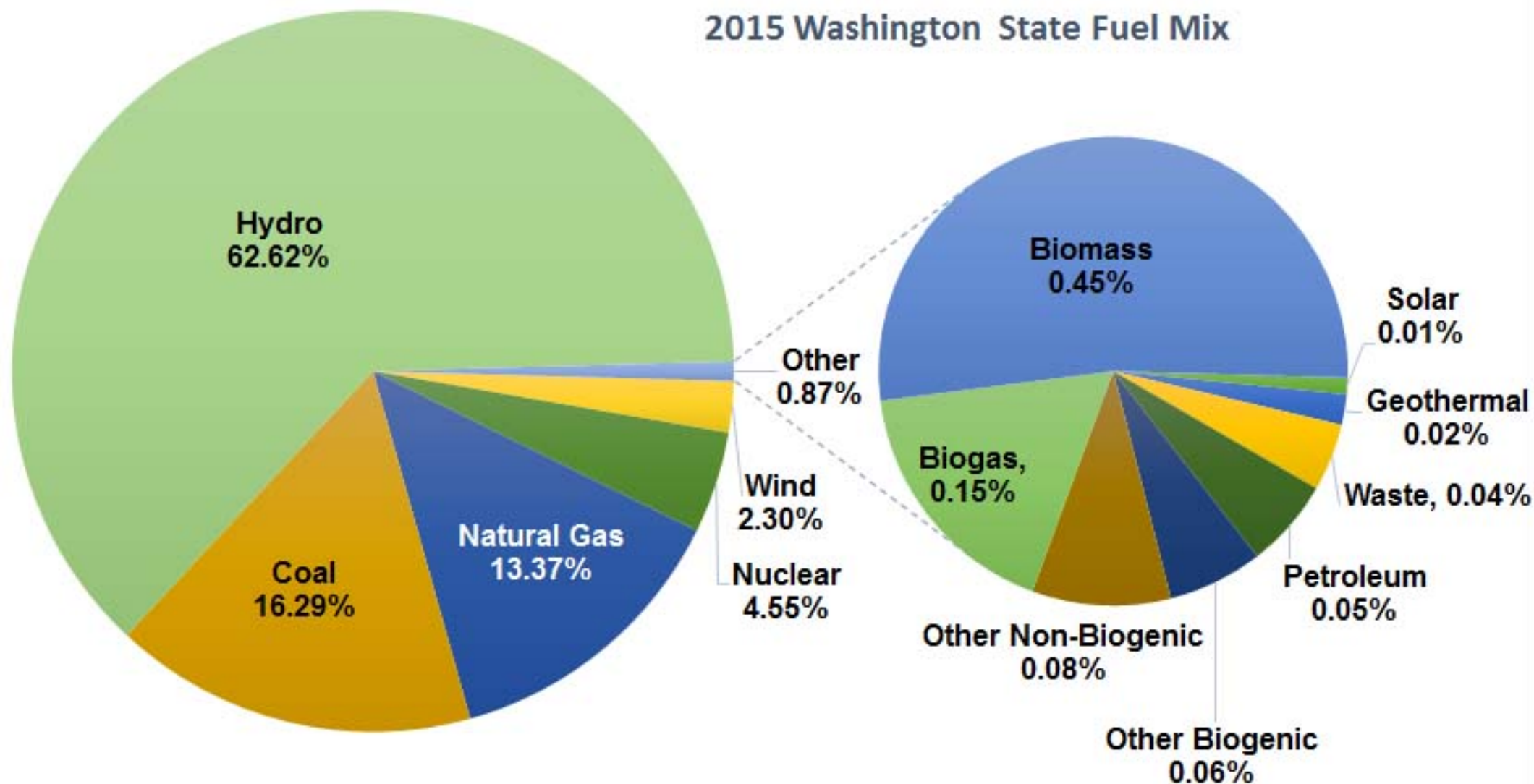
Sales Tax / VAT



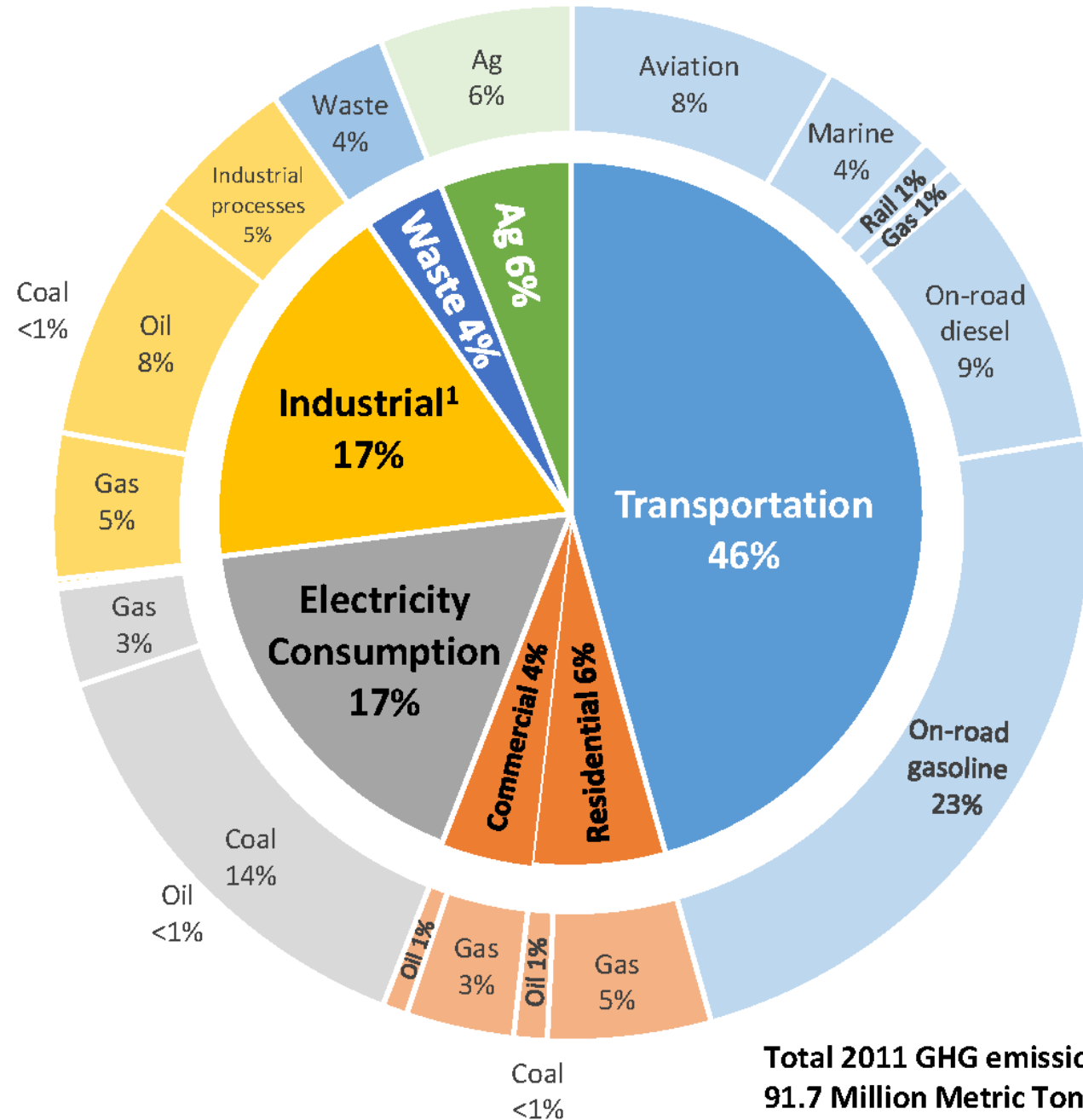
In Short:

- ***ENERGY*** is always in balance. What we do on one side will always affect the other.
- ***CARBON*** is a pollutant of our conventional energy system that can be mitigated from the supply-side or demand-side.
- ***TAXES*** can be used to mitigate bad behavior, encourage positive behavior, and drive investments for innovation.

WA Fuel Mix for Electricity



WA Carbon Makeup



Total 2011 GHG emissions:
91.7 Million Metric Tons CO₂e

Tax by Design

- (i) The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in ***proportion to their respective abilities*** ...
- (ii) The tax which the individual is bound to pay ought to be ***certain and not arbitrary*** ...
- (iii) Every tax ought to be levied at the time, or in the manner, in which it is most likely to be ***convenient for the contributor*** to pay it.
- (iv) Every tax ought to be so contrived as to take out of the pockets ***as little as possible***, over and above that which it brings into the public treasury of the state.

Additional Tax Design Points

- the ***negative effects*** of the tax system on welfare and economic efficiency—***they should be minimized***;
- ***administration and compliance costs***—all things equal, a system that ***costs less to operate*** is preferable;
- fairness other than in the distributional sense—for example, fairness of procedure, avoidance of discrimination, and ***fairness with respect to legitimate expectations***;
- ***transparency***—a tax system that people can understand is preferable to one that taxes by ‘stealth’.

Source vs. Sink

Table 11.2. Greenhouse gas emissions by source and by end user, 2006

| Source | Emissions (MtCO ₂ e) | End user | Emissions (MtCO ₂ e) |
|------------------|------------------------------------|--------------------|------------------------------------|
| Power stations | 185 | Business | 211 |
| Transport | 153 | Transport | 158 |
| Industry | 122 | Residential | 156 |
| Residential | 85 | Agriculture | 52 |
| Agriculture | 45 | Public | 22 |
| Services | 28 | Waste management | 22 |
| Waste management | 22 | Industrial process | 18 |
| Refineries | 16 | Exports | 16 |
| Land use change | -2 | Land use change | -2 |

Note: MtCO₂e = million tonnes of carbon dioxide equivalent.

Source: Committee on Climate Change, 2008, xxiii.

Business type #1: Energy Intensive, Trade Exposed Industries

- Export sensitive industries
 - Global industries
 - Price takers, meaning the market doesn't care about WA cost structure
 - Many thousands of well-paying rural jobs.



Business type #2: Local, family owned businesses

Are local businesses more or less resilient to a carbon tax than other national brands?



Business type #3: Utilities

- Any tax is a pass-through to their customers.
- Affects the largest number of stakeholders
- They Want \$'s for EE and capital asset investments.



Where are revenues spent (est. \$000)

Revenue neutral – Reduce sales and property tax

- Pros: Politically appealing as it would not be a tax increase.
- Cons: Only direct connection to CO2 is the consumption price signal.

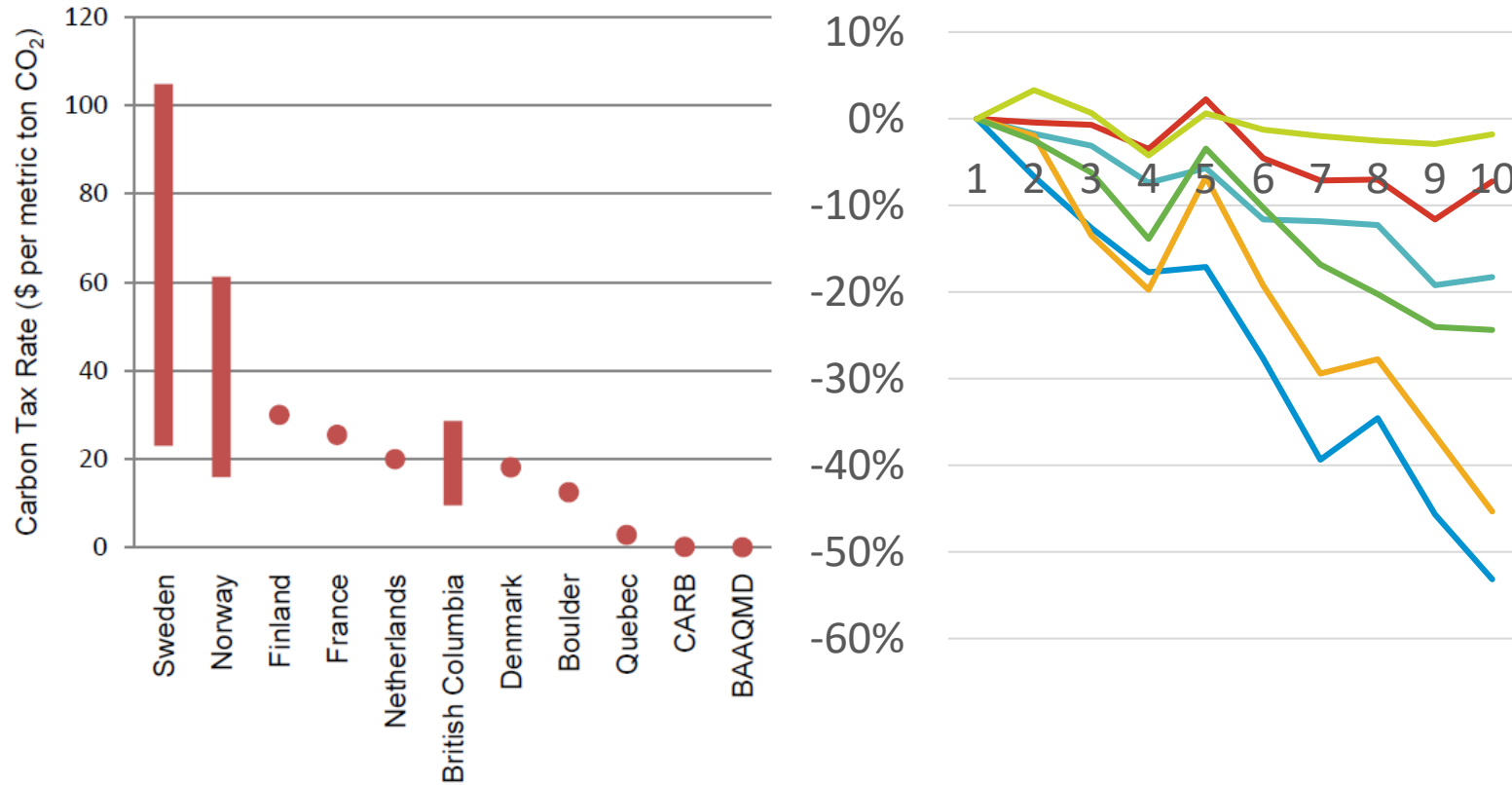
Invest in other priorities

- Pros: Schools and Higher Ed need \$20B for full funding
- Cons: Only direct connection to CO2 is the consumption price signal.

Investment in de-carbonized infrastructure

- Pros: Magnifies the effects of de-carbonization (Denmark, Germany)
- Cons: Government is making spending decisions (avenue for corruption?).

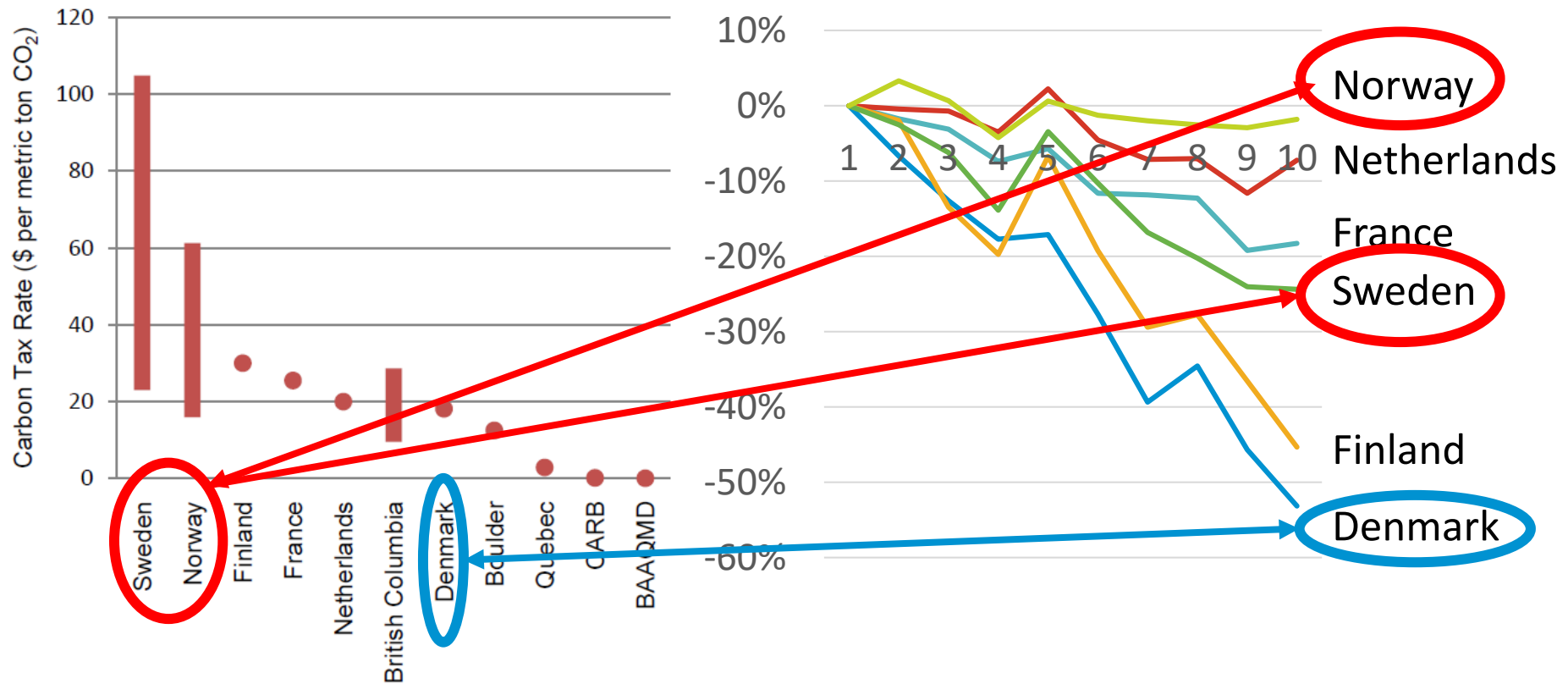
Tax Rate: How much to charge?



But does higher tax rates create lower consumption?

Not always.

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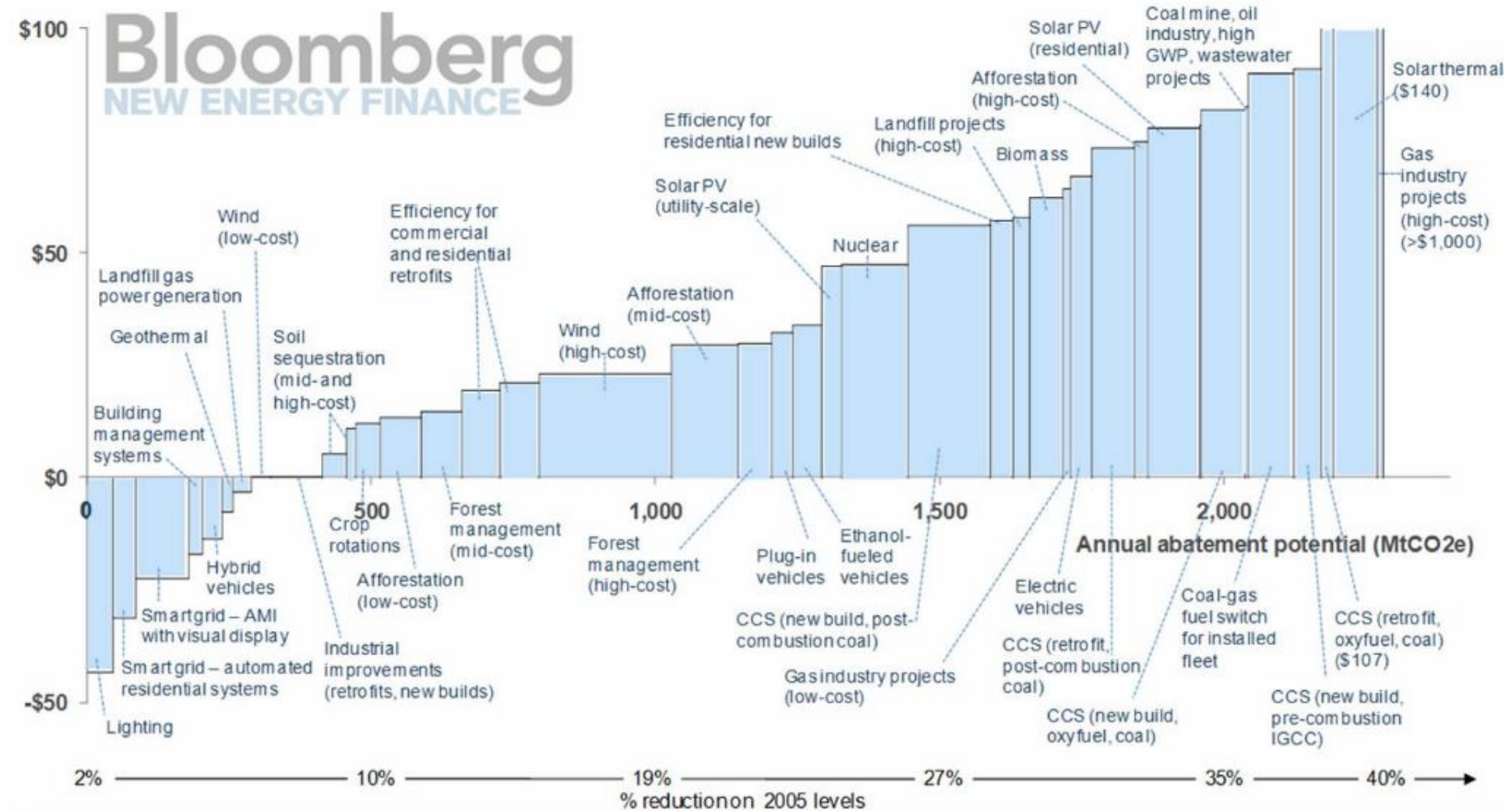


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Revenue Distribution

- Sweden, Norway: Used to raise revenue for Government
- UK, France: Revenue-Neutral and offsets taxes elsewhere in the system.
- Denmark, California: Revenue used to invest in carbon-efficient technologies.

Revenue Distribution: Marginal Abatement Costs



How should the business community respond?

- Should the business community become involved?
 - Is a carbon tax good for business?
 - If so, what should they recommend?
-
- A legislative effort means businesses are at the table.
 - An initiative effort means businesses will be considered the foe.
-
- If an initiative fails, legislature will have less motivation to revisit the issue, as “the public dismissed the idea”

WBA adopted a Design by Goals approach

Primary goal:

Design a set of mechanisms that...

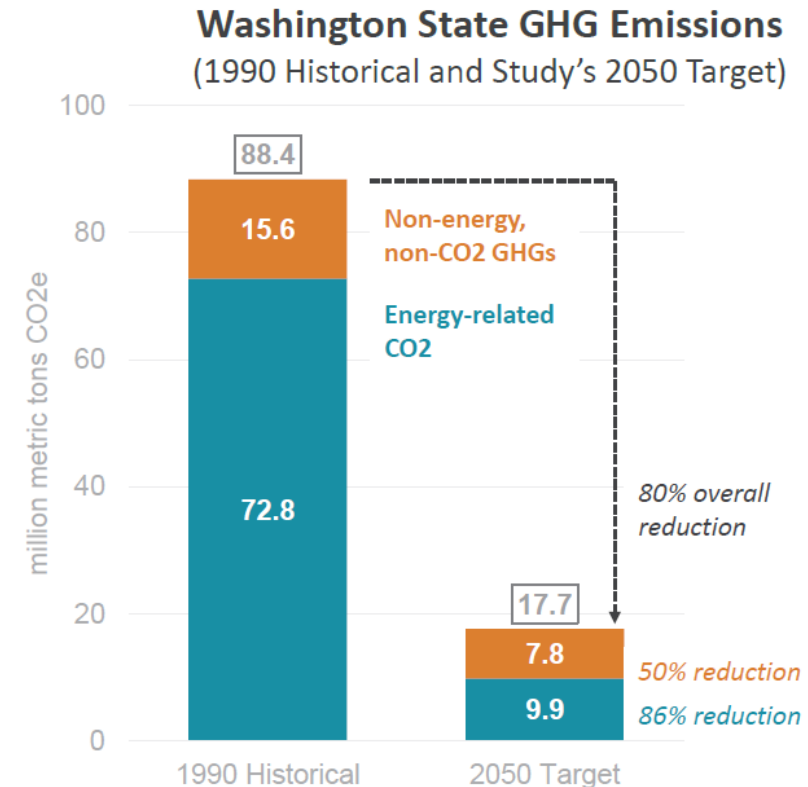
- **Work Product** *Accelerate reduction of long-term cumulative GHG emissions from Washington state activities at the lowest cost, thereby achieving the state's 2035 goal while maintaining compatibility with 2050 "Deep Decarbonization Pathways".*
- **Timing** *Enabling language in time for whatever bill emerges for passage in 2018 legislative session.*

Secondary Goals

1. Maintain stable, reliable and affordable energy;
2. Avoid incentivizing a net transfer of emissions out of state (“leakage”);
3. Avoid increase or stimulate decrease, in emissions and energy costs within economically distressed communities;
4. Encourage entrepreneurialism, innovation, and investment that can benefit our goals, over a wide range of technologies;
5. Avoid distressing sensitive businesses in Washington;
6. Maximize independence from political manipulation;
7. Serve as model for roll-out to other states;
8. Provide transparent and accurate reporting
9. Method and approach that is adaptable and revised as part of robust system design;
10. Boost jobs and economic growth, particularly those in rural areas and manufacturing industries.

Adopted a Deep Decarbonization End State for WA

- To demonstrate to citizens a firm commitment to the intentions of a carbon tax – to de-carbonize the economy.
- Prioritize goal-driven innovations over politically motivated spending



Focused on 6 key areas

- Energy and Fuel Switch
- Energy Efficiency
- Transportation
- Innovation
- Sequestration
- Carbon Explorer

Engaged the Business Community

- Companies Conquer Carbon, held Sept 2018.
- Over 80 business leaders in attendance.
- Each Committee Chair had 5 minutes to communicate their section!

Thanks to our Sponsors



FOSTER PEPPER



Actions

- Senate Bill (SB) 6203 sponsored by 16 democratic senators
- Passed Energy, Environment, and Technology Committee
- Passed Senate Ways and Means Committee to the Senate Floor
- Stalled on Senate Floor due to lack of votes.
 - (first carbon tax legislation to reach the floor)

Brief Summary of Second Substitute Bill

- Imposes a carbon pollution tax equal to \$12 per metric ton of carbon dioxide emissions on the sale or use of fossil fuels within the state of Washington and the generation or import of electricity in Washington generated using fossil fuels, beginning July 1, 2019.
- Increases the tax rate by \$1.80 per metric ton (MT), beginning July 1, 2021, until reaching \$30 per metric ton of carbon dioxide.
- Directs the carbon tax revenues to be distributed into four accounts for activities that reduce greenhouse gas (GHG) emissions connected to energy use and other activity in Washington; provide assistance to vulnerable communities and workers in fossil fuel industries; increase climate resilience; and support rural economic development.
- Establishes a Clean Energy Investment Program for both investor-owned utilities (IOUs) and consumer-owned utilities (COUs) to allow an electric or gas utility to claim a credit of up to 100 percent against the carbon tax for approved investment in projects that reduce or offset carbon emissions from the utility.

Update on Sept 13, 2018

- WBA spun out the Low Carbon Prosperity Institute to continue the data-driven work
- Initiatives are lined up ready for signature gathering.
- <https://www.seattletimes.com/seattle-news/politics/washington-states-carbon-tax-bill-dies-in-legislature/>
- Initiative 1631 submitted with 375,000 signatures (needed 260,000)

Initiative 1631

- \$15 carbon ***fee***, rising \$2 / year
- Estimated to raise \$1 billion per year for the state.
- Fee can only be spent on projects approved by a commission
- Commission includes 15 people
 - Chair
 - 6 co-chairs
 - Commissioner of Public Lands
 - Department of Commerce
 - Department of Ecology
 - Recreation and Conservation
 - 4 at-large positions (1 tribe and 1 low-income)

Questions?