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December 6, 2022

MEMORANDUM

TO: Council Members

FROM: Annika Roberts, Resource Policy Analyst

SUBJECT: Policy Update: Infrastructure Investment & Jobs Act and Inflation Reduction Act

BACKGROUND:

Presenter: Annika Roberts, Resource Policy Analyst

Summary: Two pieces of legislation have come through congress in the past year and a half that will have huge impacts on the country's energy sector and will shape the context within which we do our work. These bills are the Infrastructure Investment and Jobs Act (IIJA) or the Bipartisan Infrastructure Bill and the Inflation Reduction Act.

There is a lot included in this legislation, much of which will have to be translated through the states and other organizations charged with implementation and distribution, meaning a great deal of their impact is yet to be defined. This presentation will be a high-level overview of what is in these bills and how they might interact with the Council's work.

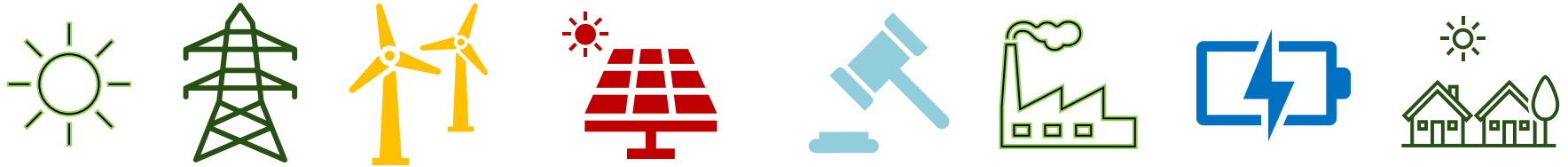
Relevance: None of this influx of money from these bills will be coming directly to the Council but they are still important for us to start growing our understanding of because:

1. The goals of these bills align with those of the Council. They are interested in providing the country with a safe adequate reliable power system, as are we.

2. They are going to be hugely impactful to the arena in which we do our work. They will affect how energy is produced, how much that costs, who's producing it, and how it gets from point A to B.

Background: Passed in November 2021, the IIJA is a \$1.2 trillion bill with \$550 billion in new infrastructure funding over the next 5 years. The IRA is a budget reconciliation bill that invests \$370 billion in climate and clean energy over the next 10 years and aims to cut US greenhouse gas emissions by about 40% by 2030.

More Info: <https://www.congress.gov/bill/117th-congress/house-bill/3684/text>
<https://www.congress.gov/bill/117th-congress/house-bill/5376/text>



Policy Update: BIL & IRA

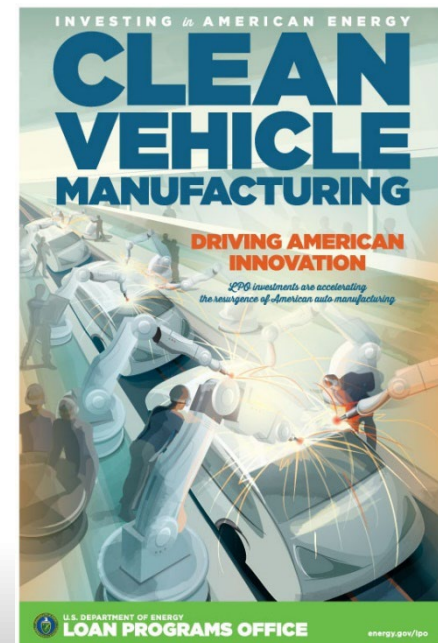
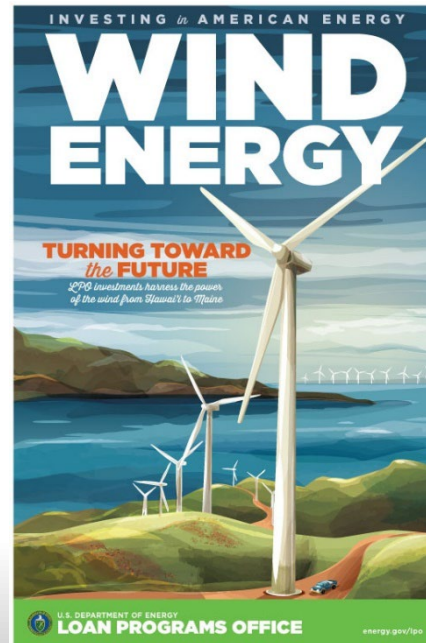
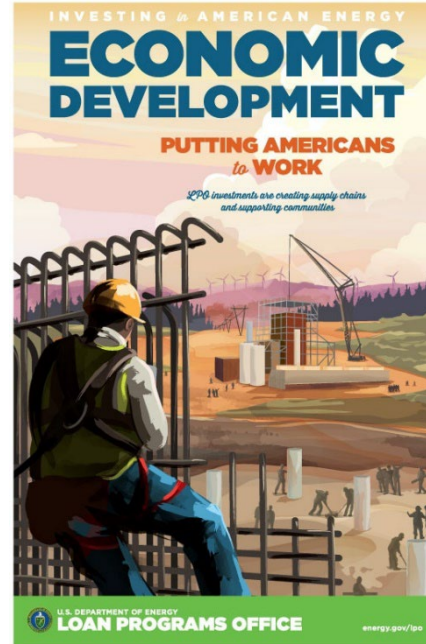
December 7, 2022

Council Meeting

Annika Roberts, Resource Policy Analyst

What's Going On?

- Why this matters to the Council?
 - Similar goals
 - Impact context of our work
- What's the scope of this presentation ?



Highest Level: BIL

*Bipartisan Infrastructure Law/
Infrastructure Investment & Jobs Act*

Passed November 2021

\$1.2 Trillion bill

Billions to reauthorizations and
existing programs

\$550 billion in new federal
infrastructure

- Focus on:
 - Clean energy projects and infrastructure
 - Manufacturing and industrial transformation
 - Water
 - Buildings & schools
 - Fairness for workers and communities
 - Community resilience
 - Transportation
 - Methane & natural gas distribution

Highest Level: IRA

Inflation Reduction Act

Passed August 2022

Budget reconciliation bill

Invests \$370 billion in climate and clean energy over next 10 years

Aims to cut GHG emissions by ~40% by 2030

Also includes sections on deficit reduction, Medicare, and the ACA

- Focus on:
 - Clean tech manufacturing
 - Industrial transformation
 - EV deployment
 - Manufacturing and supply chain
 - Transmission
 - Buildings
 - Energy transition for workers and communities
 - Resilient and healthy communities

Diving Deeper: BIL

Grid infrastructure and Resiliency

- \$10 bil increase in BPAs borrowing authority

Supply chains for clean energy technologies

Fuels and technology infrastructure investments

- Carbon capture, utilization, storage and transportation infrastructure
- Hydrogen research and development
- Nuclear energy infrastructure
- Hydropower

Enabling energy infrastructure investments and data collection

- Dept. of energy loans programs
- EIA

Energy Efficiency and building infrastructure

- Residential and commercial EE
- Buildings, schools, and nonprofits
- Industrial EE
- Misc. (including weatherization assistance program, EE/conservation block grant program, rebates etc.)

Methane reduction infrastructure

Abandoned mine reclamation

Natural resources-related infrastructure, wildfire management and ecosystem restoration

Western water infrastructure

Authorization of appropriations for energy act of 2020

Wage rate requirements

Miscellaneous

Diving Deeper: IRA

Tax credits via Committee on Finance

Incentives for biodiesel, renewable diesel, and alt fuels, sustainable aviation fuel credit, clean hydrogen production credit etc.

- Clean electricity and reducing carbon emissions
- Clean fuels
- Clean energy and efficiency incentives for individuals
- Clean vehicles
- Investment in clean energy manufacturing and energy security
- Superfunds
- Incentives for clean electricity and clean transportation
- Credit monetization and appropriations

Extension/modification of credit for renewable energy, CO sequestration credit and zero emissions nuclear power credit

Clean vehicle credit, credit for previously own clean vehicle, commercial clean vehicles, alternative fuel refueling property credit

Extension/increase/modifies nonbusiness energy property credit & new EE home credit, res clean energy credit, EE com building deduction

Clean electricity production/investment credit, cost recovery for qualified facilities, property and energy storage tech, clean fuel production credit

Diving Deeper: IRA

These are mostly in the form of grants

Via Committee on Banking, Housing and Urban Affairs

- Improving EE or water efficiency or climate resilience of affordable housing

Via Committee on Commerce, Science and Transportation

- Investing in costal communities and climate resilience
- Alternative fuel and low emission aviation technology program

Via Committee on Energy and Natural Resources

- Energy:
 - Residential EE and Electrification rebates
 - Building efficiency and resilience
 - DOE loan and grant programs
 - Electric transmission
 - Industrial
- Natural Resources:
 - Offshore wind (leasing on the outer continental shelf)

Via Committee on Agriculture, Nutrition, and Forestry

- Rural development and agriculture (additional loans for renewable energy, rural energy for America, Biofuel infrastructure, USDA assistance for rural electric coops)

Via Committee on Environmental Public Works

- Air pollution (clean heavy duty vehicles, reduce air pollution at ports and schools, low emission electricity program, methane emissions reduction program)
- Hazardous materials (Climate justice block grants)
- Transportation infrastructure (neighborhood access and equity grant program)

Via Committee on Homeland Security and Governmental Affairs

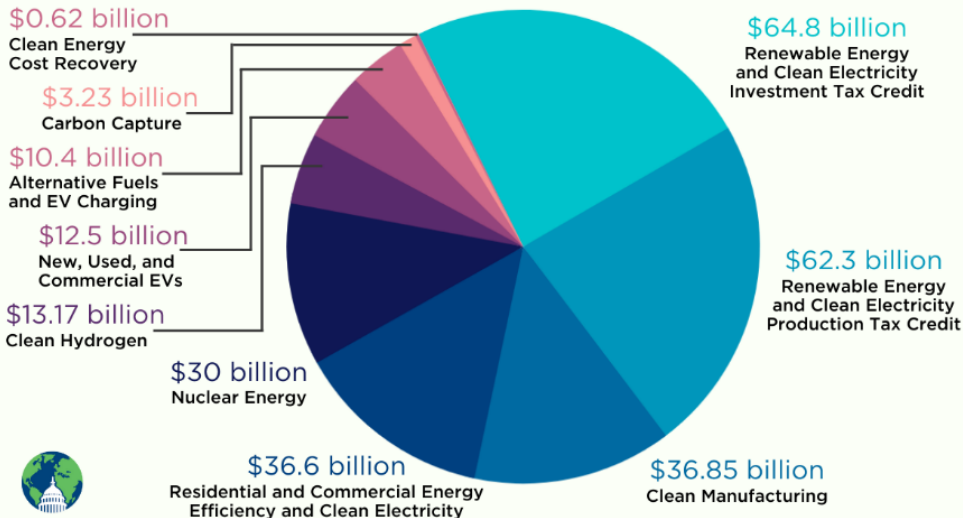
- US Postal Service clean fleets

Via Committee on Indian Affairs

- Tribal climate resilience, native Hawaiian climate resilience, tribal electrification program

Highlights

Carrots Over Sticks: Green Tax Credits in the Inflation Reduction Act



Source: Congressional Budget Office

Graphic by: Alison Davis

INFLATION REDUCTION ACT

(AUGUST 2022)

\$2 billion for domestic manufacturing grants



INFRASTRUCTURE INVESTMENT AND JOBS ACT

(NOVEMBER 2021)

\$7.5 billion for charging infrastructure



\$3 billion for zero-emissions equipment and climate action plans at ports

\$5 billion for clean or zero-emission school buses



\$3 billion for Neighborhood Access and Equity Grants to improve transportation access

\$66 billion for passenger and freight rail



\$9.7 billion for better reliability and resilience in rural areas

\$65 billion to modernize and expand the national grid



\$8.6 billion in rebates for energy efficiency upgrades

\$3.5 billion to the Weatherization Assistance Program



\$27 billion for a national climate bank to finance green projects in underserved communities

\$21 billion in environmental remediation funds



\$19.5 billion for climate-smart agricultural practices

\$3.3 billion for wildfire risk reduction



Sources: Sen. Cantwell, the White House, BlueGreen Alliance, National Wildlife Federation, Evergreen Action, Bipartisan Policy Center

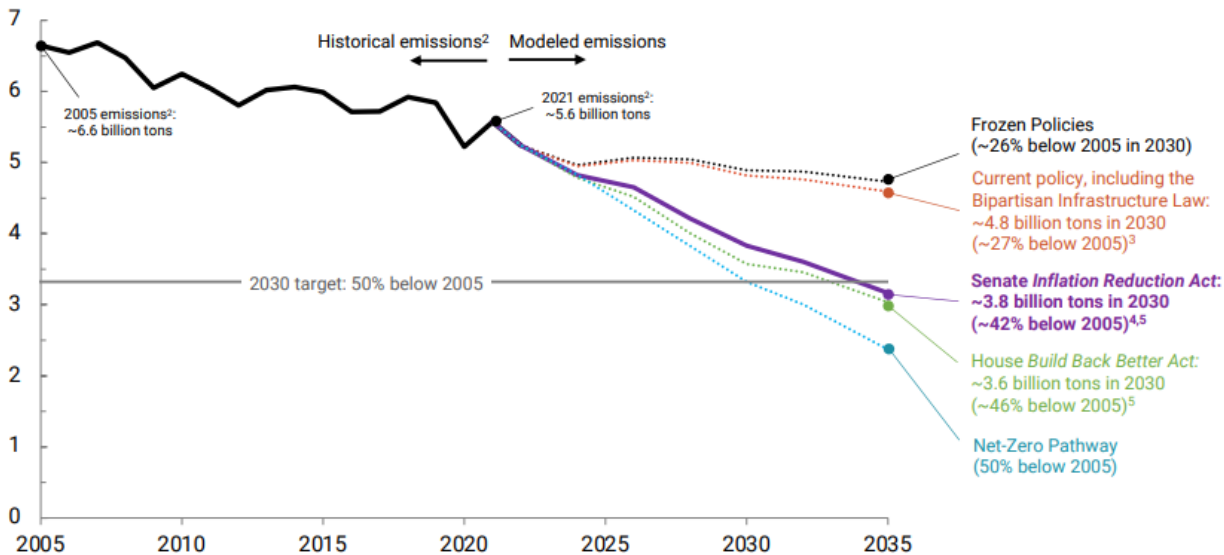
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Highlights

REPEAT Rapid Energy Policy Evaluation and Analysis Toolkit

Historical and Modeled Net U.S. Greenhouse Gas Emissions (Including Land Carbon Sinks)

billion metric tons CO₂-equivalent (Gt CO₂-e)¹



The Senate *Inflation Reduction Act* would:

- cut annual emissions in 2030 by an additional ~1 billion metric tons below current policy (including the Bipartisan Infrastructure Law)
- close two-thirds of the remaining emissions gap between current policy and the nation's 2030 climate target (50% below 2005)
- get the U.S. to within ~0.5 billion tons of the 2030 climate target
- reduce cumulative GHG emissions by about 6.3 billion tons over the next decade (through 2032).

1 - CO₂-equivalent emissions calculations use IPCC AR4 100 year global warming potential as per [EPA Inventory of Greenhouse Gas Emissions and Sinks](#). All values should be regarded as approximate given uncertainty in future outcomes.

2 - Historical data from [US EPA Inventory](#) for 2005-2030; 2021 preliminary emissions estimate assumes total net emissions change in proportion to 6.7% year-on-year change in CO₂ emissions from energy and industrial processes estimated by [Global Carbon Monitor](#).

3 - Modeled emissions exclude any changes in passenger and freight miles traveled due to surface transportation, rail, and transit investments in IJA. [According to the Georgetown Climate Center](#), emissions impact of these changes depend heavily on state implementation of funding from IJA, which could result in anywhere from -14 Mt to +25 Mt change in CO₂ emissions from transportation in 2030.

4 - Results reflect preliminary modeling based on the [July 27, 2022 draft legislation](#).

5 - Results reflect average of estimated high and low oil & gas production scenarios, which span +/- 20 Mt CO₂-e in 2030 (see p. 14-15). Impact on land carbon sinks based on analysis by [Energy Innovation](#).

ADVANCED NUCLEAR ENERGY

CLEANER and SAFER

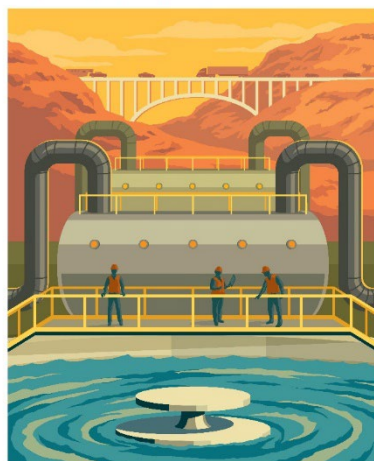
LPO investments in next-generation nuclear technology move the nation toward a low-carbon future

U.S. DEPARTMENT OF ENERGY
LOAN PROGRAMS OFFICE

energy.gov/lpo

CRITICAL MATERIALS

Extraction • Manufacturing • Mining • Processing • Recovery • Recycling



BUILT IN AMERICA

ENERGY.GOV/LPO

Takeaways

BIL

- Infrastructure updates
- Clean energy demonstrations

HYDROGEN

Generation • Infrastructure • Transportation



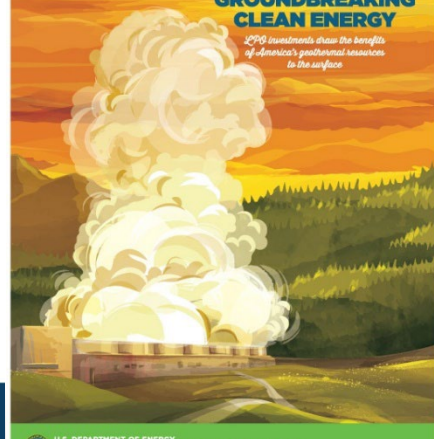
BUILT IN AMERICA

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GEOTHERMAL POWER

GROUND BREAKING CLEAN ENERGY

LPO investments draw the benefits of America's geothermal resources to the surface



U.S. DEPARTMENT OF ENERGY
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IRA

- Tax credits pushing adoption & innovation
- US manufacturing & supply chain dev

Questions

