

Reforming Subsidies in the US Energy Sector: Large Challenges Lay Ahead

OECD Workshop on Subsidy Reform and Sustainable Development: Political Economy Aspects

Helsinki, Finland

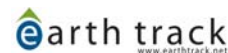
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US Energy Subsidies: Regression, Not Progress

- **Large base:** subsidies in 2003 worth \$37-\$64 billion per year in 2003. (Koplow, 2004).
- **Lots of new subsidies:** EPACT 05: \$90-\$120 billion over 10 years; other bills continue.
- **States active as well:** ~200 state subsidies to ethanol and biodiesel, all productive inputs. (Koplow for GSi, pending).



Implications of Subsidies are Substantial

- Subsidy-driven capacity expansions.
 - US nuclear power: federal subsidies of 4 – 8 c/kWh, levelized.
 - Under some scenarios, public subsidies > levelized new plant cost.
 - Ethanol and biodiesel: high energy prices help, but build out appears too high to be sustainable.
- Insufficient attention to least-cost carbon reduction strategies.
- Insufficient attention to quality of price signals in various energy markets.



Causes: Energy Subsidies Part of Larger Structural Problem

- **Political:** spending other people's money; salience of special interests.
- **Accounting:** fragmentation of data; indirect value transfer hard to measure; disclosure requirements incomplete.
- **Economic:** rent seeking behavior, political entrepreneurship.



Causes: Why are Things Getting Worse?

- Energy prices, security, and climate change lead to increased legislative activity.
 - Potentially large political risks of rational actions (e.g., carbon tax).
 - Subsidizing everybody bypasses difficult trade-offs.
- Conference committee dynamics
 - Freeze out minority party.
 - Add new language rather than reconcile differing versions.
 - No chance to read prior to vote.
- Weakened Checks to Spending
 - No use of Presidential veto.
 - Unfettered use of earmarks.
 - Expiration of pay-as-you go requirements.



Reform Options

- Subsidy contestability.
- Transparency from within government.
- Transparency from outside of government.
- Focus on state as well as federal activity.



Structural Reforms: Subsidy Contestability

- **Subsidy impact assessments**
 - Costs, benefits, alternatives.
- **Competition**
 - Define the objective, not the method: “Reduce demand for imported oil” rather than “support domestic oil production.”
 - Lots of substitutes; don’t forget the demand side.
 - Auction access to constrained subsidy programs to bid down public cost; reduce corruption risks.
- **Reintroduce spending constraints**
 - “Pay-as-you go” rules do work, though integrated budgets, risk measurement, also needed.
 - Congressional pay-for-performance.



Structural Reforms: Transparency in Legislative Activities

- **Right of review.** Improved rules for conference committee activities.
- **Changes more visible.** Mandate use of text markup language in bill versions, as many states already do.
- **Strip anonymity.** Mandate name of legislator introducing and sponsoring earmarks; identification of beneficiary constituent(s) by name.



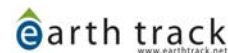
Structural Reforms: Transparency in Tax and Program Expenditures

- **Prospective Evaluation**
 - Open cost estimation models and associated assumptions to public review, validation.
 - More resolution on estimates: by industry (for JCT); more line item detail (for CBO).
 - Integrate PV to reduce gaming of mandated 10 year scoring window.
 - Rules: no vote without scoring; minimum time to score rises with expected revenue loss.
- **Tracking**
 - Assign each special tax break a unique tax subsidy number, tracked in tax filings.
- **Retrospective Evaluation**
 - Ex post evaluation of subsidy usage and comparison to original estimates.
 - Formal report on variance versus estimate; and for variance between JCT and Treasury.



Structural Reforms: Transparency in Credit and Insurance Programs

- **Visible beneficiaries.** Publish commitments and performance in a disaggregated, standardized way.
- **Full costing.** Integrate administrative costs in pricing of the credit or insurance product; est. of subsidy.
- **Measure benefit to recipient.** Prepare estimate of intermediation value of commitments, using financial risk modeling.
- **Measure contingent liabilities.** Mandate disclosure of implicit insurance, liability caps, including expected value of exceeding them.



Should Internal Reform Fail...

- Internal reforms heavily opposed by Congressional and industry beneficiaries.
- Major internal changes possible, but unlikely.
- External transparency becomes critical; once mastered, can make internal reform possible.



External Reforms: Why the Mundane Matters

- Long-term focus on the “boring” is needed.
 - Environmentally harmful subsidies: \$1 trillion per year or more worldwide.
 - Undermine nearly every environmental, health, social policy goal.
 - This loss will continue until we overcome our informational deficit on perverse subsidies.
- Model: Corporate reporting before the SEC.



External Reforms: New Level of Coordination Needed

- Challenge is complex; will require integrated efforts across many specialized NGOs, funders, possibly some governments.
- Objective: develop enabling tools to see policy interventions more clearly, in near real-time.
 - Important to establish a revenue model so these tools can be self-sustaining.
 - Phased approach to speed payback and learning: policy type (e.g., credit); or activity (e.g., legislative tracking).



Potential New Tools: Legislative Versioning, Comparisons

- Text comparison applications, tailored to federal legislation.
 - Track industry submitted language, maps to Congressional proposals.
 - Convert bill formats to allow text comparisons, insert of mark text coding.
 - Autogenerate links to statutory language that is being changed.
- Integrated commenting on legislative language.
 - Allows distributed specialized knowledge to be quickly centralized.
 - Functionality would be a blend of a Wiki and a blog.



Potential New Tools: Financial Modeling, Automated Data Integration

- Rule-based allocation of tax expenditures by sector.
- Development of credit and insurance risk pricing models to adjust subsidy based on geography, industry, firm type, firm size.
- Topical searches of budgets.
- Automated link generation between legislative context and external data on political contributions, emissions, some tax filings.



Reference: Regulatory and Fiscal Oversight in the US – An Uneven Playing Field

- Existing checks and balances often institute stringent controls over regulatory activities, lax controls over fiscal activities.

Core Element	Use in Regulatory Process	Use in Fiscal Process
1) Public Availability of Basic Information	Text of all final regulations is collected in Code of Federal Regulations	-Some but not all subsidies identified in annual federal budget
2) Public Justification		
<i>Public Notice of Proposal</i>	-Publish proposal with explanation in Federal Register	No advance notice required.
<i>Required Justification</i>	-Agency must explain basis and purpose of proposal -Agency must analyze costs and effects, and consider regulatory alternatives	-Early analysis of proposals contains only budgetary impact; often proprietary with no public access. -No information on other impacts.
<i>Public Comment Process</i>	-Public comments solicited on proposed rulemaking -Agency must respond to significant comments	-No public comment process prior to passage.
<i>Final Result</i>	Publish final rule in Federal Register with changes and explanation	-Cost impacts are in Budget (including Analytical Perspectives chapters) -Descriptive definitions, but little evaluation of broader impacts or beneficiary sectors.
3) Analysis of Environmental Effects	-Environmental impact statement, including consideration of alternatives. -Public notice and comment.	No review or comment.

Source: Koplow/Dernbach (2001)



Reference: Full Costing for New Nukes - Who is Bearing the Risk?

*****PRELIMINARY ESTIMATES*****

	Levelized Cost		Discussion
	Low Estimate	High Estimate	
	(2004 cents/kWh)		
Initial estimate, "no policy" plant cost	3.064	8.218	
Add subsidies existing in baseline	0.791	4.222	
Add increased security costs	0.008	0.008	
Estimated real "no policy" cost	3.863	12.447	
Subsidies as share of total levelized cost			
Baseline subsidies	0.791	4.222	Technically would offset price rises rather than baseline cost.
Production tax credit, accredited reactor	0.854	1.366	
Delay Insurance, accredited first two plants	0.740	0.815	
Loan guarantee, recipient reactor	1.793	1.793	Intermediation value only; assuming no defaults.
Total subsidy value	4.177	8.195	
Subsidy share/total levelized cost	108%	66%	
Share, excluding delay insurance	89%	59%	

Source: Doug Koplow, "Nuclear Power in the US: Still Not Viable Without Subsidy," NPRI Symposium, November 2005.



Reference: Common Forms of Intervention in Energy Markets

Intervention Type	Description
Access ^l	Policies governing the terms of access to domestic on-shore and off-shore resources (e.g., leasing).
Cross-Subsidy [*]	Policies that reduce costs to particular types of customers or regions by increasing charges on other customers or regions.
Direct Spending [*]	Direct budgetary outlays for an energy-related purpose.
Government Ownership [*]	Government ownership of all or a significant part of an energy enterprise or supporting service organization.
Import/Export Restriction ^l	Restrictions on the free market flow of energy products and services between countries.
Information [*]	Provision of market-related information that would otherwise have to be purchased by private market participants.
Lending [*]	Below-market provision of loans or loan guarantees for energy-related activities.
Price Controls ^l	Direct regulation of wholesale or retail energy prices.
Purchase Requirements ^l	Required purchase of particular energy commodities, such as domestic coal, regardless of whether other choices are more economically attractive.
Research and Development [*]	Partial or full government funding for energy-related research and development.
Regulation ^l	Government regulatory efforts that substantially alter the rights and responsibilities of various parties in energy markets, or exempt certain parties from those changes.
Risk [*]	Government-provided insurance or indemnification at below-market prices.
Tax ^l	Special tax levies or exemptions for energy-related activities.

^{*}Interventions included within the realm of fiscal subsidies.

^lCan act either as a subsidy or a tax depending on program specifics and ones position in the marketplace.

Source: Koplow, D. (1998). *Quantifying Impediments to Fossil Fuel Trade: An Overview of Major Producing and Consuming Nations*. Prepared for the OECD Trade Directorate.

