

# A Taxonomy of Energy Policies Affecting the Smart Grid



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# Overview

Beyond cheerleading, there are four broad types of energy policies that can be used to enhance or expedite adoption of target technologies or products:

1. Reduce costs for manufacturers and sellers
2. Reduce costs for customers
3. Grow the market
4. Remove obstacles
5. Halfway measures.....



# Reduce costs for manufacturers and sellers

- Fund R&D (e.g., DOE-R&D grants, NREL work)
- Production tax credits
- Incentive tax credits
- Reward development to a particular goal (e.g., “golden carrot”, X-Prize)
- Clarify the rules -- drive standards development and adoption
- Fund underlying infrastructure (e.g., test facilities, new transmission)
- Increase the cost of alternatives (e.g., add carbon tax, remove depletion allowances)



# Reduces costs or prices for customers

- Rebates and coupons (e.g., for CFLs or efficient appliances)
- Investment tax credits
- Subsidies for purchase
- Create additional revenue stream (e.g., capacity payment or carbon reduction payment)
- Build out or improve supporting infrastructure (e.g., transmission mandates, advanced meter deployment, or new construction)
- Increase value to customers (e.g., improve price signals, add/expand features)



# Grow the market

- Mandate adoption (e.g., RPS)
- Mandate standards (e.g., NERC reliability standards that call for improved tools or functions)
- Customer education
- Improve and mandate price signals (e.g., TOU pricing)



# Remove obstacles

- Order agencies to deal with issues sooner
- Discipline bad market actors (e.g., FERC or CFTC enforcement)
- Penalize bad behavior (e.g., FERC or state PUC complaints and enforcement)
- Institutionalize more favorable rules (e.g., DG interconnection, state RPS and IRP, fix dumb rates)



# Halfway measures....

These aren't as effective as the other policies, but they make people feel better than doing nothing at all....

- Use the bully pulpit to talk up the goal
- Create a commission or council
- Do a study