Protecting Customers and Addressing Cross-Subsidization: Unintended Consequences of Retail Net Metering

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Origins of Net Metering

- Default Product of the Era of Dumb Meters, Dumb Prices and Low Market Penetration of Distributed Generation
- To Extent Policy Was Considered – Designed to Jump Start Market for Distributed Solar DG
Sources of Cross-Subsidy

- Passing on Fixed Costs to Non-Solar Customers
- Passing on Demand Costs to Non-Solar Customers
  - Compounded by Intermittency and Non-Coincidence with Peak Demand
- Paying Retail Price for Wholesale Product
  - Distinction Between Net Retail Metering and Net Energy Metering
Intended Objectives of Net Metering

- Simplicity
- Compatible with Dumb Meters
- Compatible with Static / Non-Dynamic Prices
- Stimulates Demand for Solar DG with Local Cross-Subsidies in Addition to Tax Credits and REC’s/SREC’s
Electricity Pricing Context

- Traditional Methods:
  1. Market Based
  2. Cost Based
  3. Avoided Cost (PURPA)

- Retail Net Metering and Administrative Valuation Lack Economic Basis
Failures of Administratively Derived Energy Prices

- PURPA and Avoided Cost Controversies of 1980’s
- Highly Subjective and Speculative Theories of Value Never Proved Sustainable
Changing Context

- Smart Meters and Dynamic Pricing (Increasing Role of Price Signals to Inform Demand)
- Dramatically Declining Cost of Solar Panels
- Increased Market Penetration by Solar DG
- Sophisticated Energy Price Signals in Wholesale Market
Unintended and Highly Unfortunate Consequences

- Socially Regressive (Tax on the Poor)
- Pays Premium Price for Least Efficient Renewable Resource
- Pays Premium Price for Most Expensive Means of Reducing Carbon Emissions (If Reduced at All)
  - Ratio of Dollars Spent to Amount of Carbon Reduced
- Distorts Energy Price Signals
Unintended and Highly Unfortunate Consequences (Cont.)

- Will lead Utilities / Regulators to Move to Straight Fixed / Variable Pricing
  - Dilution of Price Signals for Energy Efficiency
- Increases the Price of Solar Installations
  - Less of Declining Costs of Solar Panels Get Passed through to Customers
- Subsidizes Inefficient Solar Production and Provide No Incentive for Productivity Gains
Unintended and Highly Unfortunate Consequences (Cont.)

- Distorts Price Signals in Energy Market
- Massive Wealth Transfer to Solar Installers with No Appreciable Consumer Benefit
- Promotes Inefficient Southern Rather than More Beneficial Western Exposure
  - Less Economic Value
  - Less Environmental Value
- Stimulates Uneconomic Choices