Characteristics of Effective Resource Planning

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China ♦ India ♦ European Union ♦ Latin America ♦ United States

Effective Resource Planning

- Integrates *all* available resources and technologies, available on the supply-side or the demand-side
  - Includes Demand-side Management
- Aims to provide energy services at minimum total cost while meeting reliability, price and environmental constraints

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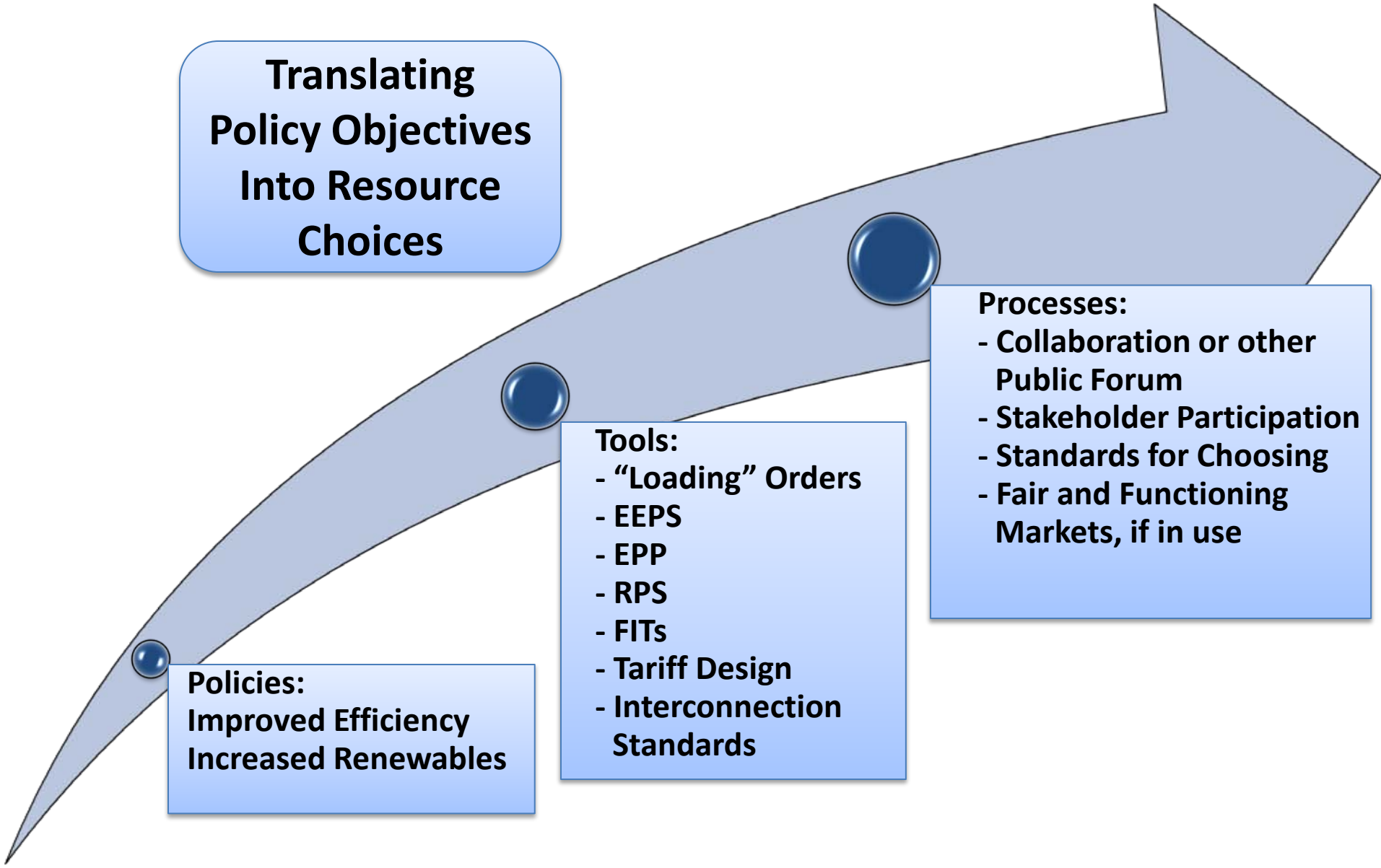
Clean Resources Often Face Barriers

- Energy Efficiency
  - Split incentives
  - Access to financing
  - Quality Assurance
  - Energy, capacity and ancillary services
- Renewable and Distributed Resources
  - Interconnection rules
  - Hookup, standby and exit fees
  - Energy, Capacity and Ancillary Services
  - Net metering or other pricing mechanism
- Stakeholders often not part of process
- Incumbents have incentives which work against clean resources


Translating Policy Objectives Into Resource Choices
Policies:
Improved Efficiency
Increased Renewables
Tools:
- "Loading" Orders
- EEPS
- EPP
- RPS
- FITs
- Tariff Design
- Interconnection Standards
Processes:
- Collaboration or other Public Forum
- Stakeholder Participation
- Standards for Choosing
- Fair and Functioning Markets, if in use

Policy Foundations That Support Clean Energy

- EE is treated as a high priority resource, equivalent or superior to supply resources
- EE integrated into IRP / Portfolio Management process
- Efficiency procured as a resource
- EE competes as alternative to transmission
- EE is a biddable commodity in energy and capacity markets

Energy Efficiency Goals

- Efficiency commitment is in statute
- Quantitative MW and MWH savings goals have been established and are producing incremental investment
- Goals are established in IRP, EEPS, or otherwise
- Energy Efficiency can be used to fulfill requirements of an RPS or similar standard

Indicators of Commitment

- TRC or Societal Cost Test is used to evaluate EE programs
- Cost-effectiveness of EE established through potential study
- EE programs reach all customer classes
- Funding for long-term, cost-effective EE has been established

Evaluation, Measurement and Verification

- Robust EM&V process has been established
- EM&V is adequately funded
- Energy savings are used to measure performance
- EM&V is conducted by an independent party or under direction of regulator

Delivering Energy Efficiency

- EE delivery structure has been established
- Resource plans are regularly updated
- Building Energy Codes for residential and commercial buildings are in place, regularly updated and enforced
- Energy efficiency is a high priority in state buildings and state funded buildings

Public Access to Clean Energy

- Public education programs on EE and Renewables
- State or regional process to pursue EE as high-priority resource
- Consumers access to high efficiency homes & buildings and appliances
- Consumers can buy renewable energy from utility or third party

Cost Recovery and Rates

- Cost recovery process exists Funding is for multi-year periods
- A base energy efficiency spending level exists, with opportunity to justify higher level
- Funds from carbon trading program support EE

Utility Financial Incentives Are Important

- Utility throughput incentive is addressed and disincentives are removed
- Utility/shareholder EE incentives are provided
- Incentives exceed amount of lost revenues

Tariff Design

- Declining block rates & high fixed charge rate designs eliminated
- Time sensitive rates
- Usage sensitive
- AMI deployment planned, underway or completed
- Demand response programs in place

Financing Clean Resources

- Sales Tax reductions or exemption for energy efficiency
- Investment Tax Credit for energy efficient investments
- State supported low cost financing for energy efficient investments in buildings and equipment
- Grants and subsidies
- System Benefits Charges
- RPS and EEPS

Distributed Generation Policies

- DG capacity and energy goals are adopted and progress is being made
- Streamlined interconnection process for DG
- Supportive policy and pricing for exit fees and standby rates
- CHP included in system planning

Emerging Issues

- Renewable Transmission Access and Cost Allocation
- Formalizing Least Cost Clean Energy Principles
- Smart Grid & System Operations
- Potential for disruptive technologies (e.g. cheap storage)
- Coping with electrification of vehicle fleet
- Valuing Carbon in Resource Planning
- Mitigating market failures through appropriate regulation

More Resources:
The US NAPEE Policy Grids

- US National Action Plan for Energy Efficiency Policy Grids: http://www.raponline.org/Feature.asp?select=116

Regulatory Assistance Project

- Nonprofit NGO founded in 1992 by experienced energy regulators
- Advises policymakers on economically and environmentally sustainable policies in the regulated energy sectors
- Funded by U.S. DOE & EPA, the Energy Foundation, Climate Works Foundation and other foundations
- We have worked in 40+ states and 16 nations

Thanks For Your attention

- Questions?
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