

# REGULATORY TOOLS TO PROMOTE RENEWABLE ENERGY SOURCES

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NARUC/USAID Energy Regulatory Partnership Program

The Public Services Regulatory Commission of Armenia  
and  
The Iowa Utilities Board

# Why Promote RES?

- Assume renewable energy sources (RES) are more expensive than the utility's cost of generation from traditional sources
- Offsetting benefits of RES:
  - Environmental
  - Diversity (technical and geographic)
  - Economic development
  - Encourage development of RES technology



# Important factors for RES policy

- Guaranteed grid access
- Long-term contract (or other assurance of long-term payment for production)
- Adequate purchase price for output
- Performance-based payments



# Guaranteed grid access

- Mandatory right of interconnection (terms may vary with size or type of generation)
- Standard interconnection agreement for smaller generators (reduced transaction costs)
- Costs of transmission or distribution system upgrades can be an issue



# Long-Term Contract

- Typically, investors expect contract terms (or other purchase guarantees) long enough to repay the investment and a return
- 15 to 25 years seems to be typical



# Adequate Purchase Price

- Must be high enough to repay investment, plus return, within term of contract (and projected life of project)
- Many ways to establish purchase price
  - Avoided cost of purchasing utility
  - Generator's expected cost of production
  - Market-based mechanisms
  - May increase or decrease over time



# Performance-Based Payment

- Typically, the renewable energy-source generator gets paid for kWhs produced; no output, no payment
- Provides strong incentive to perform, giving the purchasing utility some assurance it will receive the benefit of its bargain
- May be inequitable if performance is hindered by factors beyond the control of the generating entity



# Alternatives

- Alternative means of promoting renewable energy generation include:
  - Feed-in Tariffs
  - Net billing (kWh production netted against customer's kWh utility usage)
  - Tax credits (production vs. investment)
  - Direct government subsidy (loans, loan guarantees, interest subsidies, other)
  - Ratemaking incentives for utility-owned projects
  - Utility renewable purchase requirements





# Potential Funding Sources

- Retail rates
- Tax revenues
- Carbon emission auction revenues
- Utility tax credits
- Multi-utility assessments (share the costs)



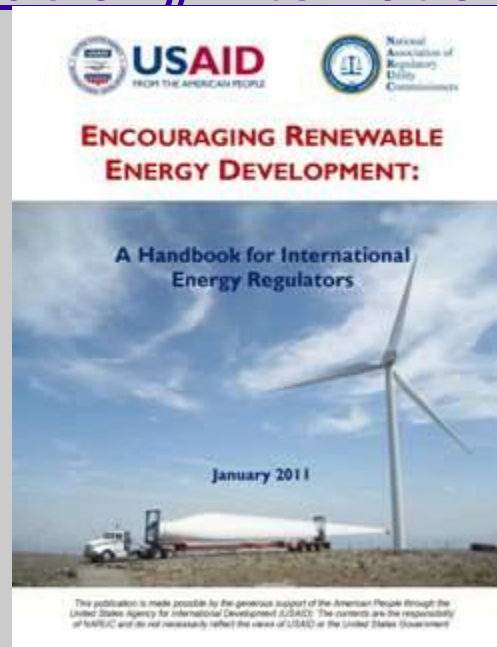
# Cost Containment

- Renewable energy promotion tends to create upward pressure on retail rates, at least in the short term
- Can limit adverse effect with caps
  - Caps on individual project size
  - Caps on overall program size



# Additional Resource

- USAID Renewable Energy Development Handbook:
- <http://www.naruc.org/International/program.cfm?page=51>



## Additional Resources, continued

- National Renewable Energy Laboratory  
“Policymaker’s Guide to Feed-In Tariff  
Policy Design”, Tech. Report NREL/TP-  
6A2-44849
- <http://www.nrel.gov/docs/fy10osti/44849.pdf>



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# Questions?

