



U.S. Department of Energy

Office of Electricity Delivery and Energy Reliability

# RENEWABLE SYSTEM INTEGRATION OVERVIEW

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# Background

- U.S. PV potential growth due to:
  - - Renewable Portfolio Standards (RPS)
  - - Technology improvements
  - - Government programs
- RSI Study started in 2006, completed in 2008\*
- Issues

# Solutions

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- - Smart inverter development
- - Grid control
- - Integrated DMS-EMS, OMS, Forecasting
- - Dynamic volt/var control
- - Modeling/simulation in GridLAB-D
  
- - Demonstrations
  
- - Microgrid R&D