

# Cost Effective Control Options and Getting SIP Credit for Innovative Energy Policies and Programs

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Ozone Transport Commission  
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**Clean EnergyEnvironment**  
STATE PARTNERSHIP



# Outline

- Energy Efficiency (EE), Renewable Energy (RE) Demand Response (DR) can make a real and significant difference on High Electricity Demand Days.
- EPA's SIP Guidance on EE/RE measures is established and road-tested.
- EPA expertise is available to help with:
  - Energy program analysis and support
  - SIP interpretations.

# Examples of EE/RE Programs/Technologies effective on HEDD

- EnergyStar
  - Buildings, Homes, appliances, roofs, products, etc.
  - Retrofits: EnergyStar 10% challenge
  - Measurement tools: Portfolio Manager
- Renewable Energy -- Solar
- Commercial, Industrial and/or Residential Buildings:
  - Efficiency and Demand Response
    - lighting, AC, other
  - Incentive and Conservation Programs like CA “20/20,” CA “flex your power” and “Utah Power Forward” can influence episodic conservation and long term energy efficiency
  - Clean Distributed Generation

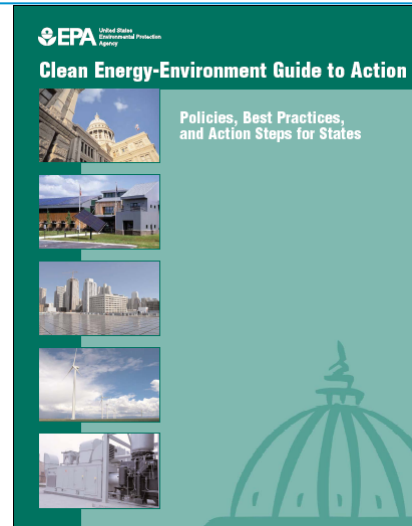
# National Action Plan for EE

- Presents policy recommendations for creating a sustainable, aggressive national commitment to energy efficiency through gas and electric utilities, utility regulators, and partner organizations.
- 7/31/06 national roll-out at National Association of Regulatory Utility Commissioners (NARUC) Summer Meetings
- Developed by 50 member Leadership Group
  - Utilities, regulators, energy directors, consumer advocates, NGO's, industrials, and others
  - DOE-EPA facilitated
- <http://www.epa.gov/cleanenergy/actionplan/eeactionplan.htm>

# EPA Clean Energy-Environment Guide to Action

NEW  
REPORT

- Clean Energy-Environment Guide to Action: Policies, Best Practices, and Action Steps for States
  - <http://www.epa.gov/cleanenergy/stateandlocal/guidetoaction.htm>
  - 16 Cost Effective Clean Energy Practices



# EPA Expertise in Voluntary Energy Programs

- EnergyStar



- CHP Partnership



- Green Power Partnership

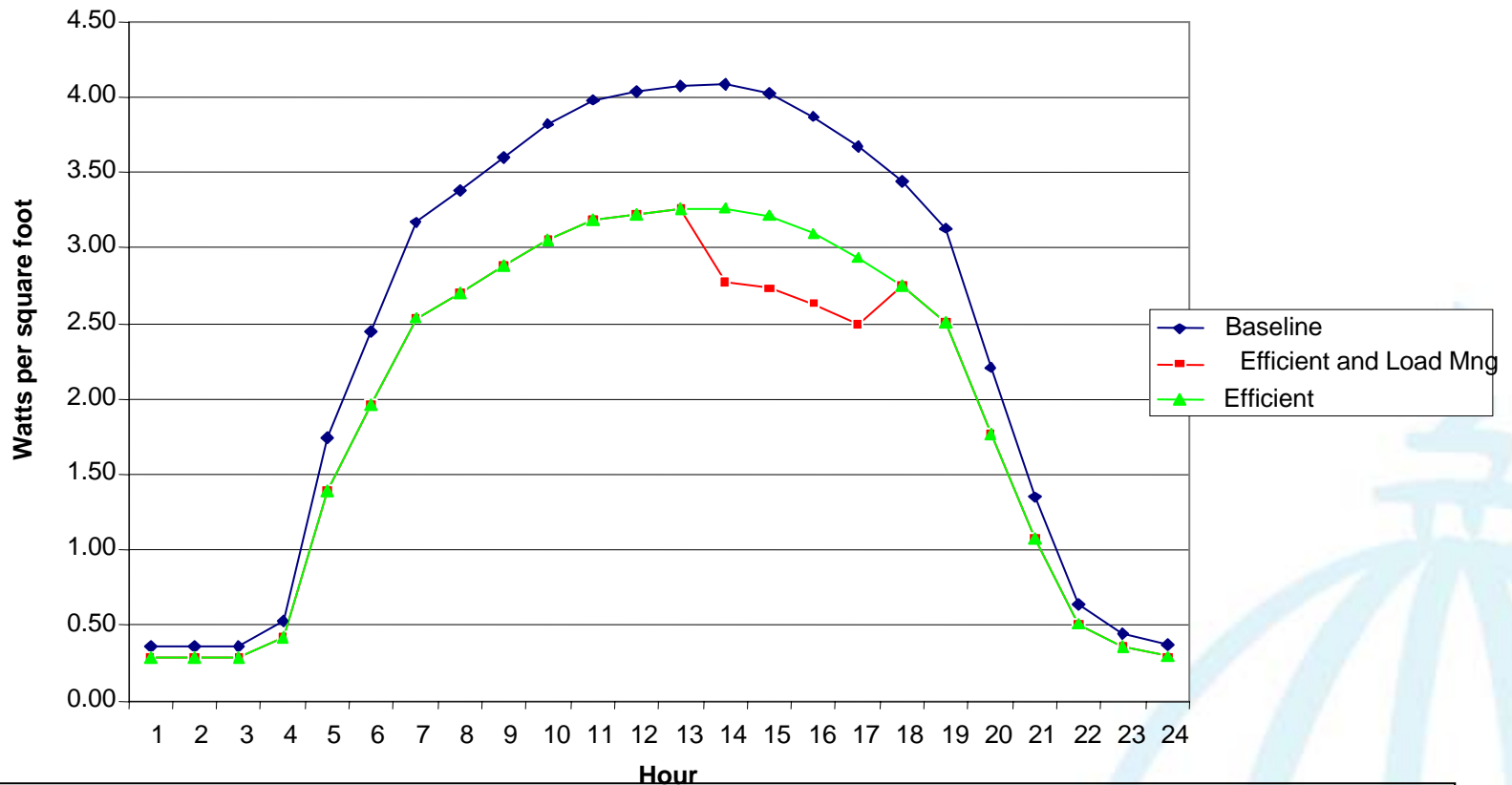


- Clean Energy-Environment State Partnership



# Efficiency and Demand Response

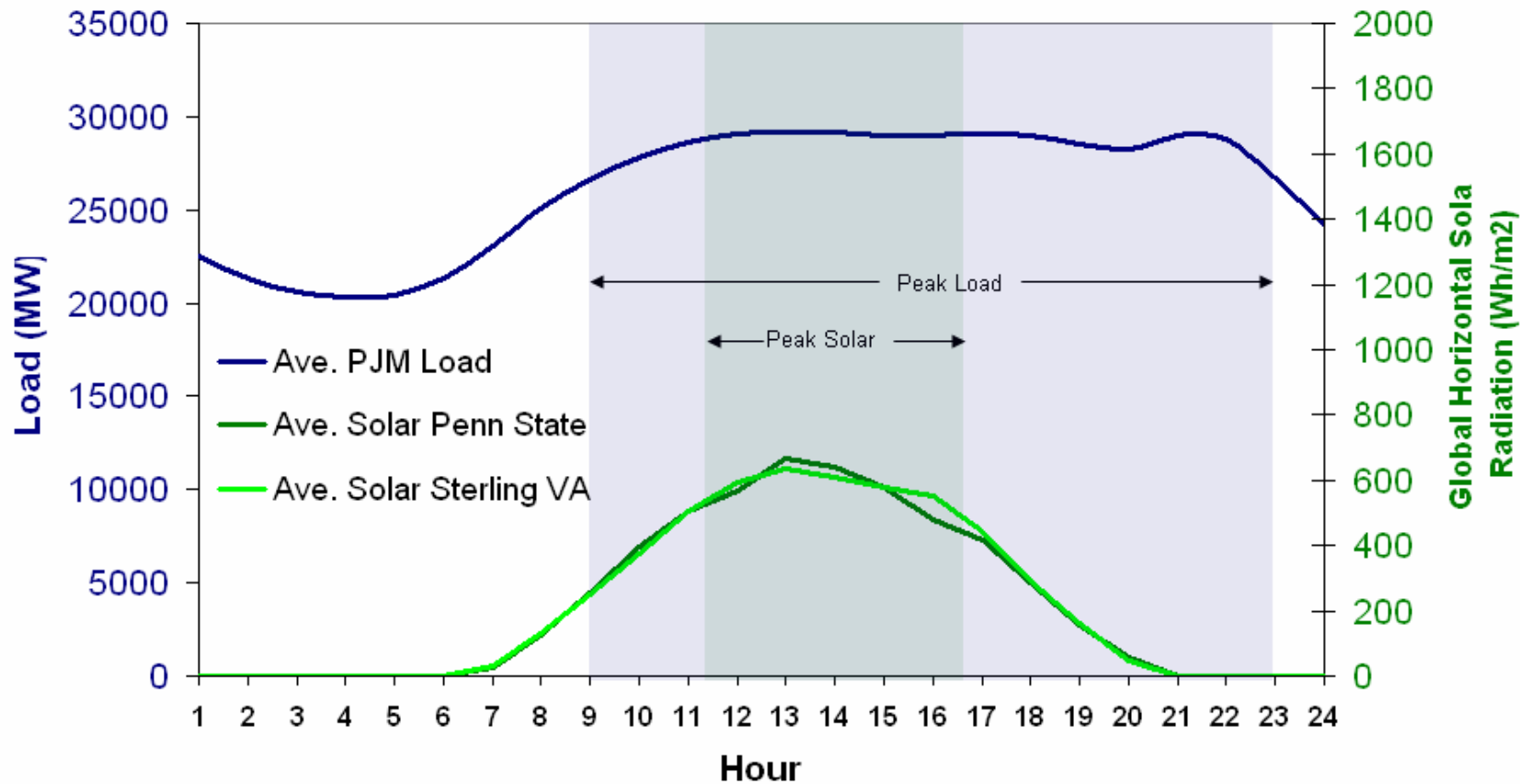
Combined Commercial Cooling and Lighting Loadshape with Efficiency and Load Management (Four-Hour Curtailment by 15%)



Source: Jeff Schlegel for the New England Demand Response Initiative (NEDRI)

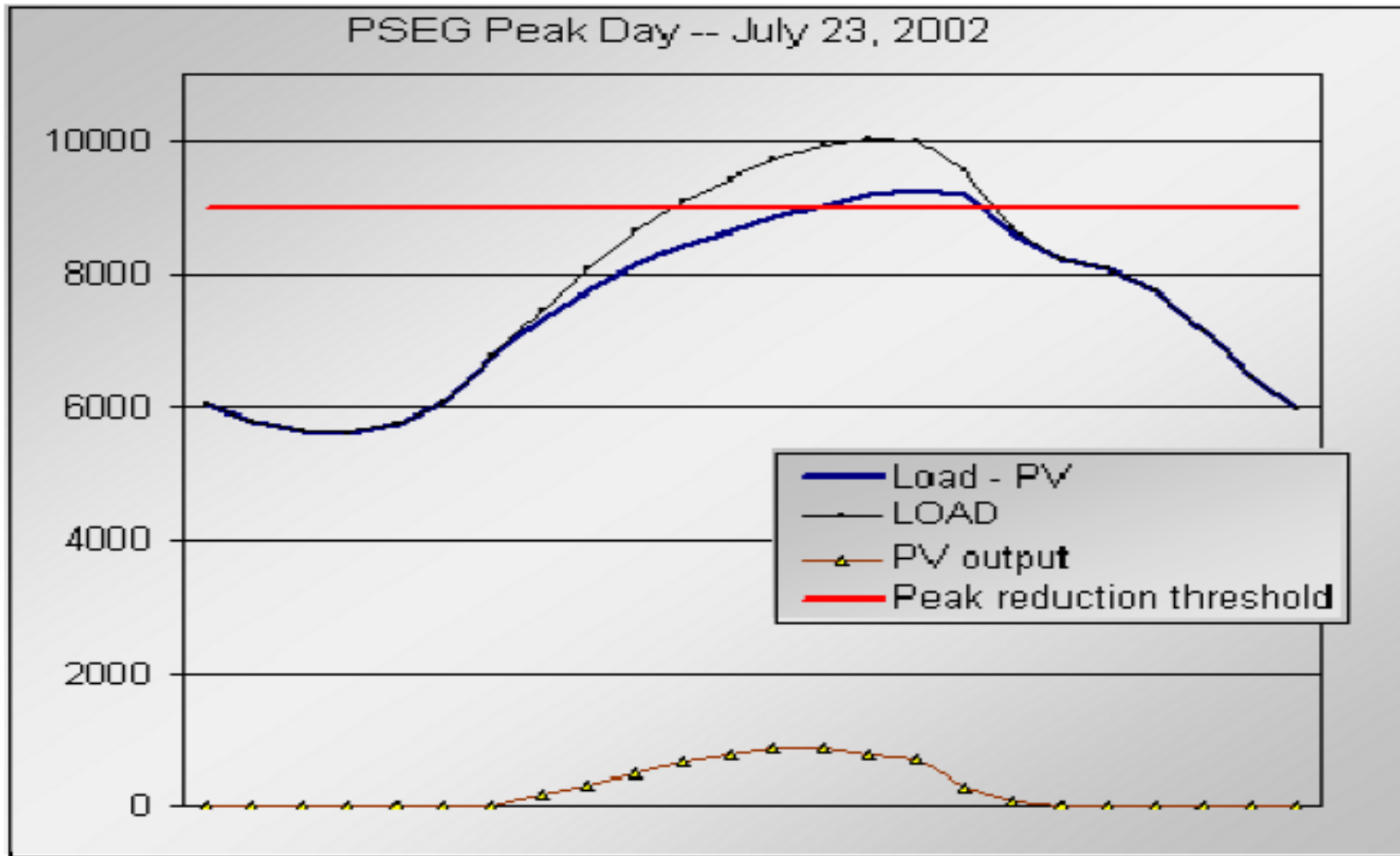
# Solar

**Average PJM Load Curve and Corresponding Solar Radiation  
at Two Locations  
During the Top 30 Daily Loads in the 2000 Ozone Season**



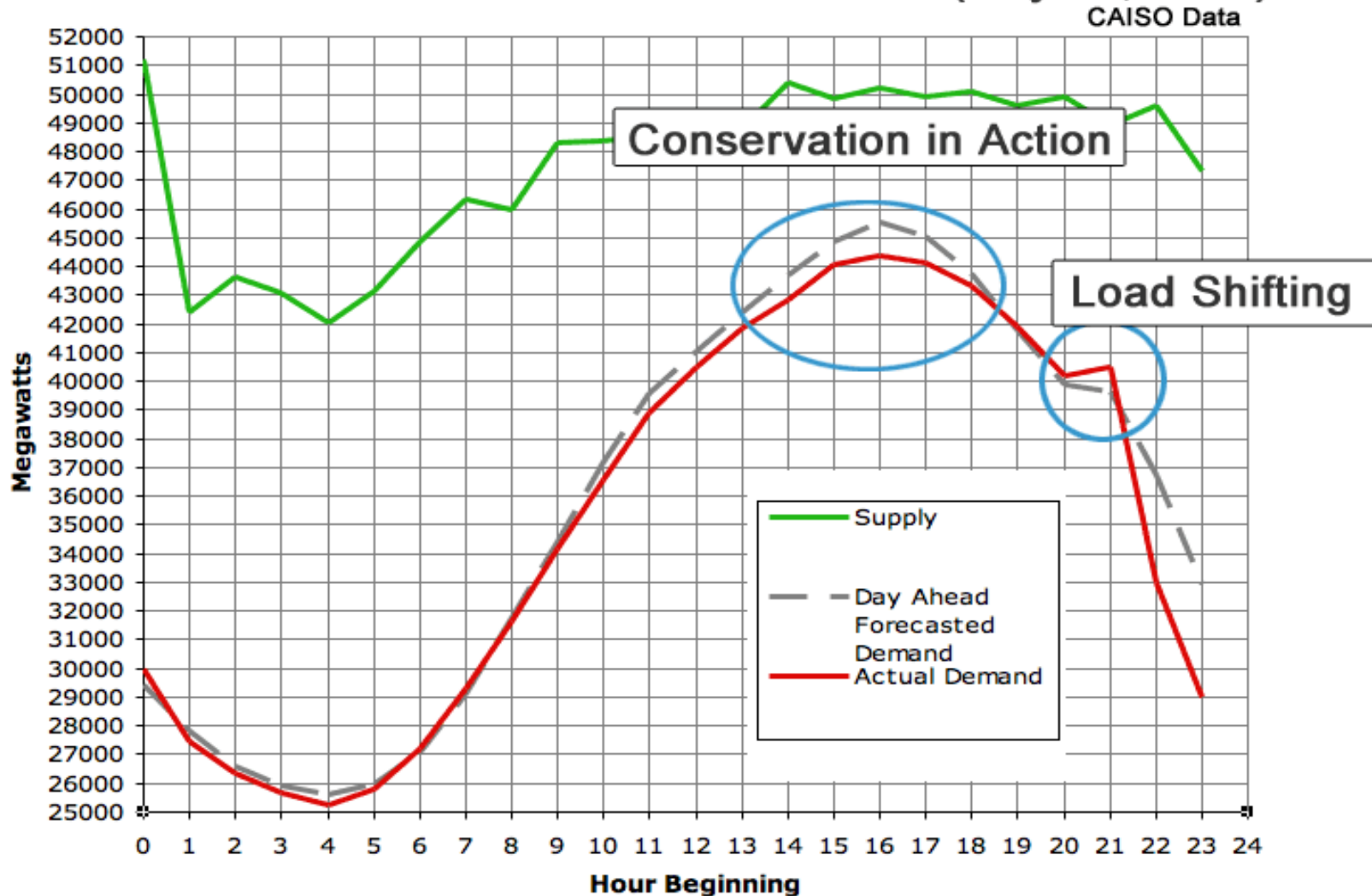


# Solar



# Voluntary Conservation/Efficiency Example – “CA Flex your Power”

Forecasted Demand vs Actual Demand (July 14, 2005)



# Existing EPA SIP Credit Guidance

- Emerging and Voluntary Measures Policy
- Guidance on SIP Credits for Emission Reductions from Electric-sector EE/RE Measures
  - <http://www.epa.gov/cleanenergy/stateandlocal/guidance.htm>
- Bundled Measures Policy
  - <http://www.epa.gov/ttn/oarpg/t1/meta/m10885.html>

# Types of EE/RE measures envisioned to be creditable in SIPs

- System Benefit Charge Programs
- Renewable Portfolio Standards
- Energy Codes
- Appliance Standards
- Gov. purchase
  - Green Power
  - EE equipment standards
- Utility run Demand Side Management Programs
- Heat Island Measures:
  - Reflective roofs
  - Tree canopy & urban forestry
  - Cool pavements
  - Green roofs
- MORE ...

# Examples of Energy Measures in SIPS

- SIP (Montgomery Co. Government Wind Purchase -- 5% )
  - >28,000 MWh/year, 0.05 tpd NO<sub>x</sub>, 8 tons per ozone season
- TX EE measures for Dallas SIP & eCALC verification tool
  - >912,000 MWh/year, 0.7 tpd NO<sub>x</sub> for 12 county area
- DOE MidAtlantic Pilot Project Report (quantification of EE/RE programs in NJ)
  - >322,000 MWh/ozone season, 242 tons per ozone season

# SIP Issues to Consider

- Can include in baseline or as a discrete measure
- Methodology for estimation of emission benefits
- Regional coordination could achieve more creditable reductions
- Intersection with Cap and Trade (requirement to retire allowances to meet surplus requirement)

# Potential Next Steps – EPA Assistance

- Analysis of potential measures
  - Energy -> Suite of EE/RE/DR measures
  - Conversion to emission reductions in terms of tons/typical ozone season day
    - Distribution of emission reductions
    - Regional analysis?
- Interpretations on SIP issues based on guidance
  - Allowance retirement issue
  - Geographic issues
  - Fit with specific SIP submittals
  - etc

# Conclusions

- EE, RE, and DR can make a real and significant difference on High Electricity Demand Days.
- EPA's SIP Guidance on EE/RE measures is established and road-tested.
- EPA expertise is available to help with program analysis and support, and SIP interpretations.
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