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• **Research**  
• **Partnership to**  
• **Secure Energy**  
• **for America**  
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**Technology Qualification Process  
Forum**

**Det Norske Veritas (U.S.A.), Inc.  
February 23, 2010**

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**SECURE ENERGY FOR AMERICA**



# The RPSEA Organization

- Innovative research model for the oil & gas industry in the U.S.
- A private 501(c)3 non profit corporation
- Research & development cooperative network of natural gas and oil experts working together in an open innovative environment
  - A Research Partnership
- Members include operators, producers, service companies, universities, national laboratories, nonprofits & state associations
- Competitively selected by DOE as the Subtitle J; Section 999 Consortium Manager under the Energy Policy Act of 2005



# RPSEA Accomplishments

- Coordinated 71 research awards worth over \$ 100 million
- 150 members reaching for common goals
  - Organizations represent more than 600,000 employees worldwide and more than 50 percent of U.S. oil & gas production
- Coordinated roadmaps for ultra-deepwater, unconventional resources and small producer research
- Channeled \$255,000 in scholarship funds to 38 students at eight universities
- Established research coordination channels with Norway, the United Kingdom, Canada, Brazil and France
- Hosted 25 technology forums across the U.S.
  - More than 1,300 people with over 12,000 hours of commitment

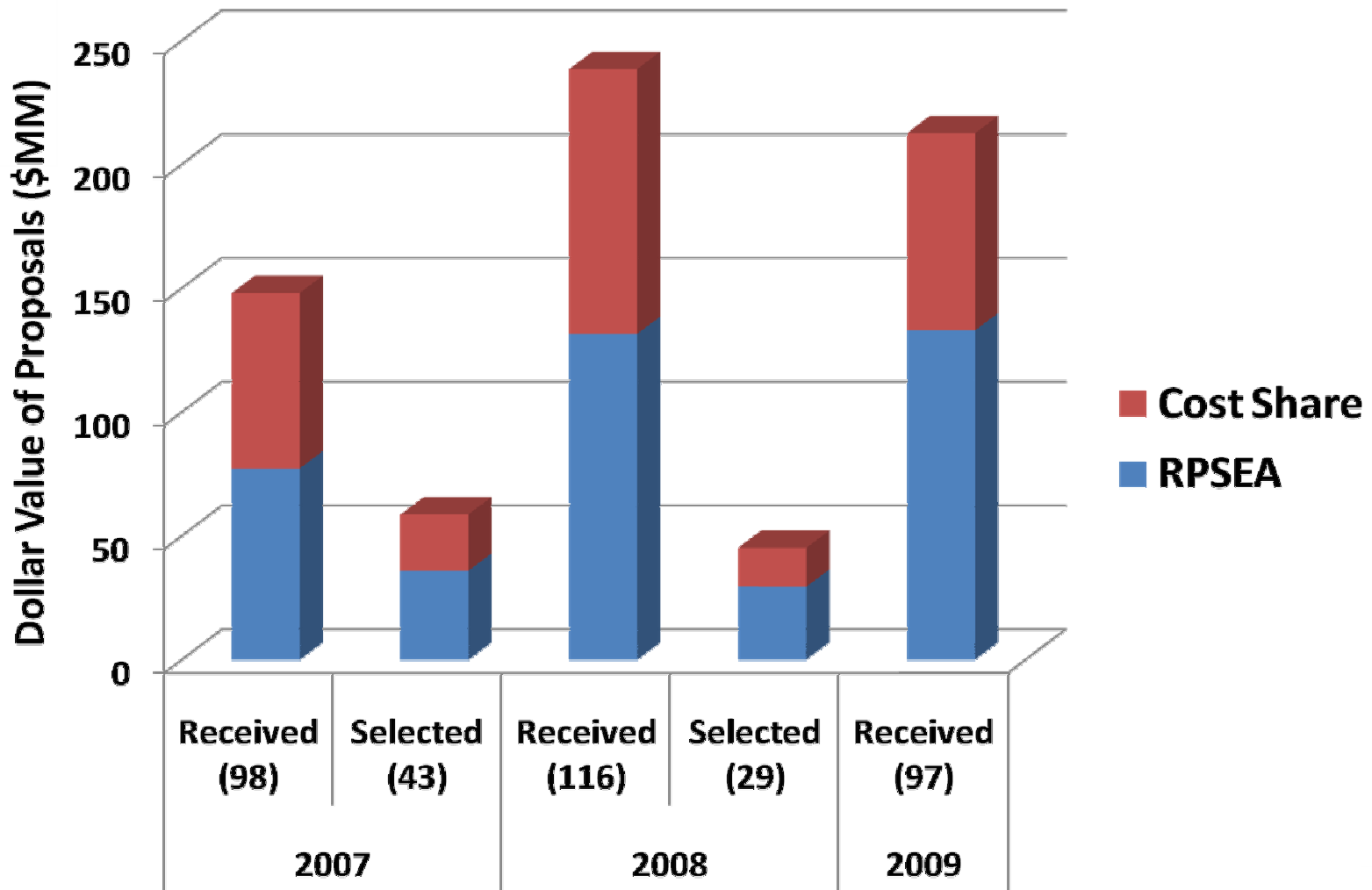
# Portfolio Overview

## RPSEA Program Selections 2007-2008

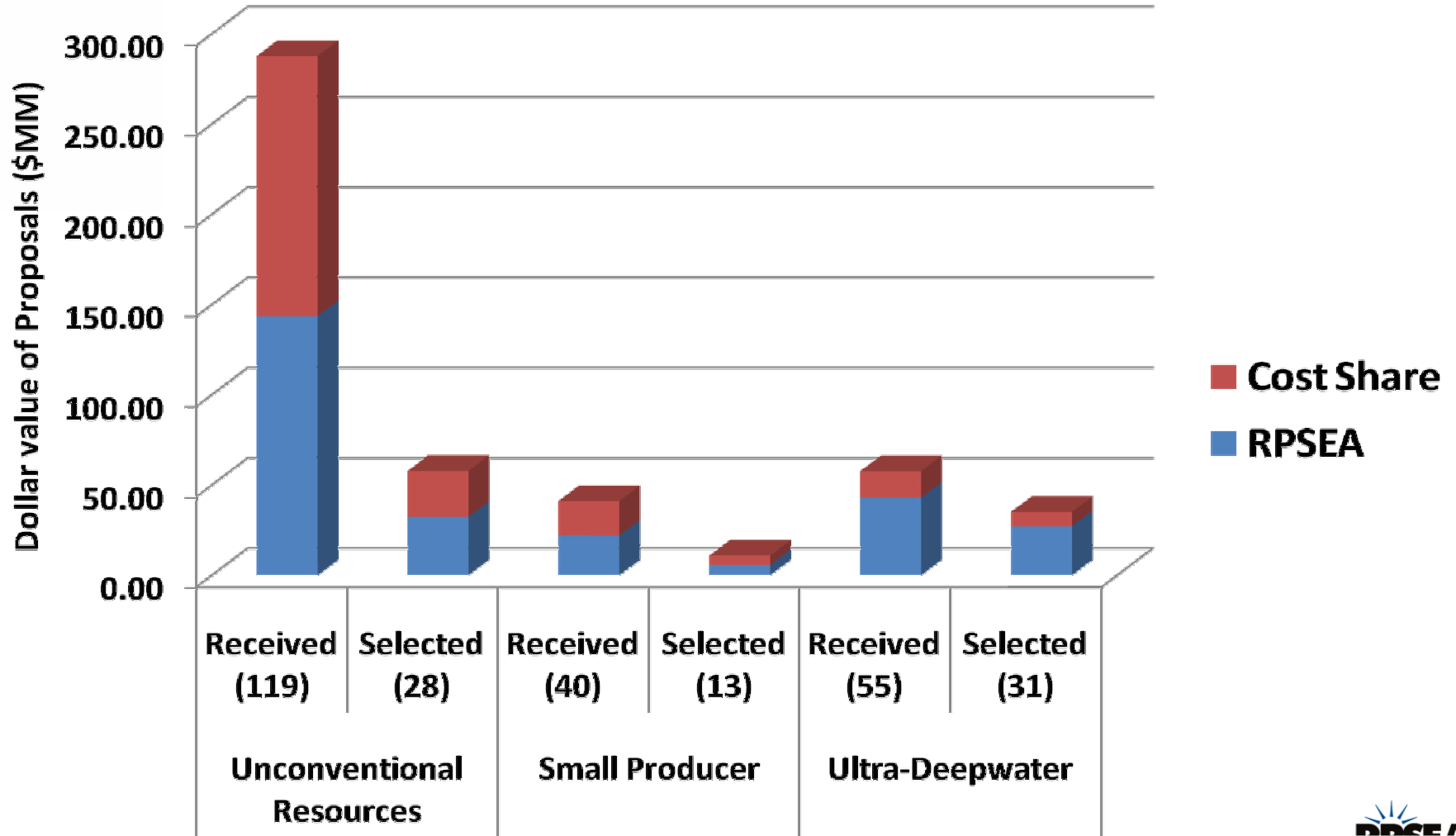
	<b>Small Producer</b>	<b>Unconventional Resources</b>	<b>Ultra-Deepwater</b>	<b>Total</b>
<b>Universities</b>	<b>10</b>	<b>18</b>	<b>9</b>	<b>37</b>
<b>For Profits</b>	<b>2</b>	<b>2</b>	<b>17</b>	<b>21</b>
<b>Non-Profits</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>8</b>
<b>National Labs</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>4</b>
<b>State Agencies</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>
<b>Total Selected</b>	<b>13</b>	<b>28</b>	<b>31</b>	<b>72*</b>

\* 69 of 72 certified or underway

# Summary of Proposals 2007-2009



# 2007-2008 Proposals

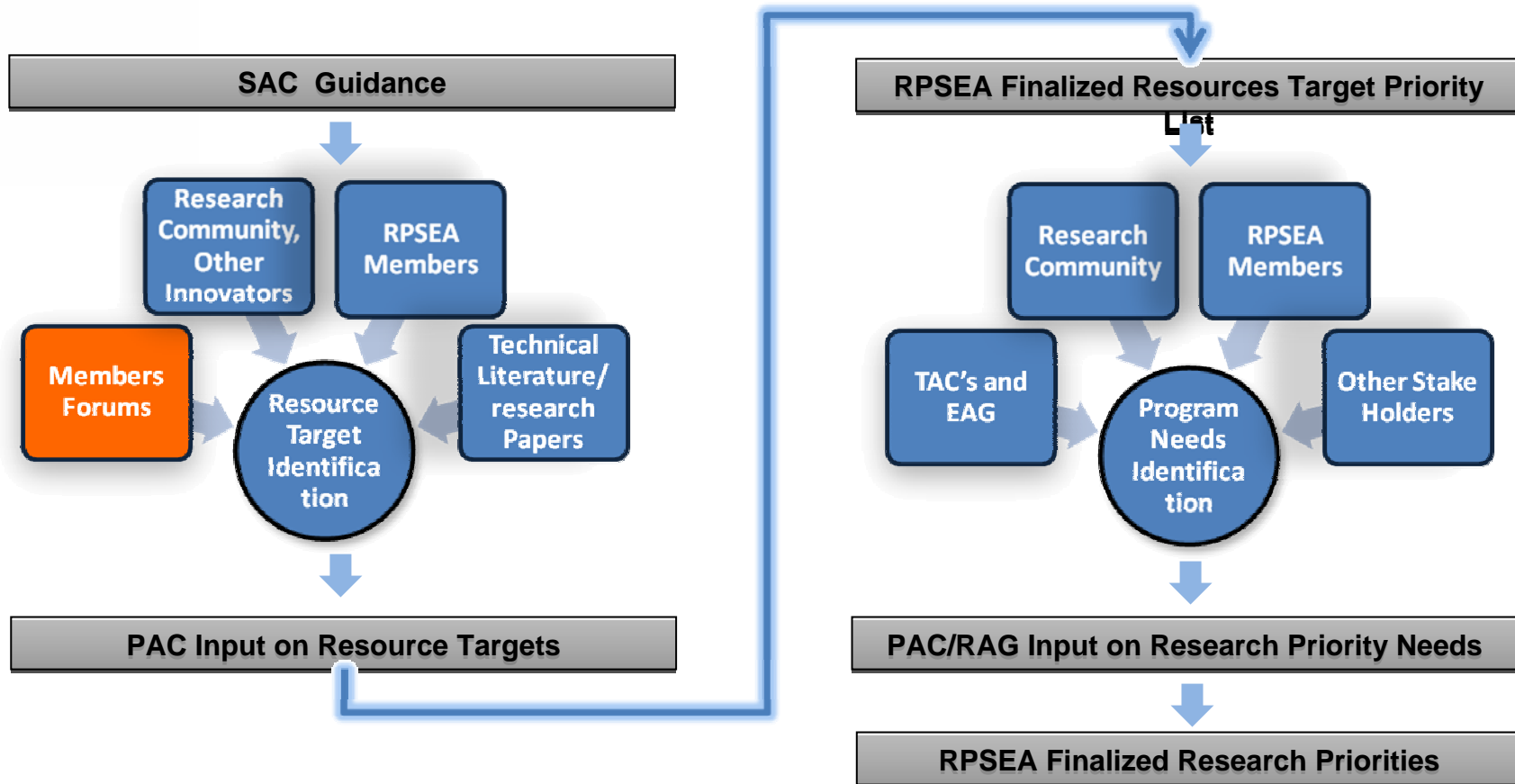




# Program Strategy and Approach

- Collaborative approach/Industry involvement throughout
- Focused, 10-year directed spending R&D program
- Emphasis on technology impact and utilization
  - Near-term deliverables
- Commercialization to market/Technology dissemination
  - Speed up the cycle
- Determine impact and recalibrate program as required
  - Integrated approach thru an Annual Plan
    - Yearly focusing of needs
    - A program, not projects
- Flexibility

# Research Priority Development Process





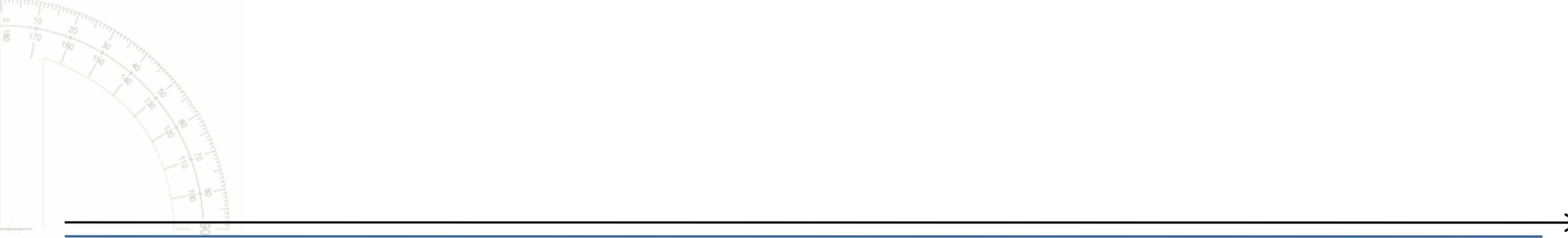
# Why Are We Here Today?

- Learn about the Technology Qualification Process (TQ)
  - Idea of assessing the level of technology readiness (TRL)
- Learn about the practice that Det Norske Veritas recommends for TRL levels
- Stakeholder interaction
  - Interactive process
- RPSEA perspective
  - Input into our annual focusing process
  - Does it make sense to move forward in our RFP's with technology readiness process
- Brainstorm, identify and create opportunities



# Technology Qualification Process

- UDW program input - Systematic qualification process (TQ)
  - Language and idea of assessing the level of readiness (TRL) now included in the RPSEA RFP process
- RPSEA recognizes two processes (scales) to be used
  - Det Norske Veritas Practice DNV RP A203
  - American Petroleum Institute Practice API RP 17N
- TRL scale is an efficient communication method for discussing the maturity of a technology
  - Ultimate goal is to determine commercialization readiness
- Different development stages
  - Concept, Proof of Concept, Prototype or Field Qualified
    - Different TRL levels within each stage
- Our RFP's ask for you to use TRL definitions when discussing technology maturity in your proposal



“The great tragedy of science – the slaying of a beautiful hypothesis by an ugly fact”

Thomas Huxley

*RPSEA – the new model for R&D in the Oil & Gas Industry*