

Distribution Transformers Procurement Practices Survey Results

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Enporion is a supply chain management solutions and services company, providing strategic sourcing and e-procurement applications and related professional services.

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Background and Methodology

- ◆ Enporion was commissioned by a major U.S. electric utility to conduct a survey of peer utilities to gain insight into the changes in procurement activities resulting from the new DOE rule on efficiency requirements.
- ◆ 22 U.S. electricity and gas utilities participated in the survey
 - Companies invited to participate represented a broad cross-section of customer size, geographies, regulatory environments, and market capitalizations
 - Survey respondents included companies with annual revenues ranging from over \$300 Million to over \$17 Billion
 - Survey respondents were based in the mid-west, northeast, and southern United States
- ◆ Respondents were sent the survey via email
- ◆ The survey was distributed on April 25, 2008 and concluded on May 14, 2008

The “Final Rule”

The United States Department of Energy has determined that energy conservation standards for liquid-immersed and medium voltage, dry type distribution transformers will result in significant conservation of energy, are technically feasible, and are economically justified. The new standards will go into effect on January 1, 2010 and according to the published rule, the new rule could raise the cost of liquid-immersed transformers by up to 12%, but should decrease electrical losses by as much as 23%. It could also raise the cost of medium-voltage, dry-type transformers by up to 13%, but should decrease electrical losses by as much as 26%.

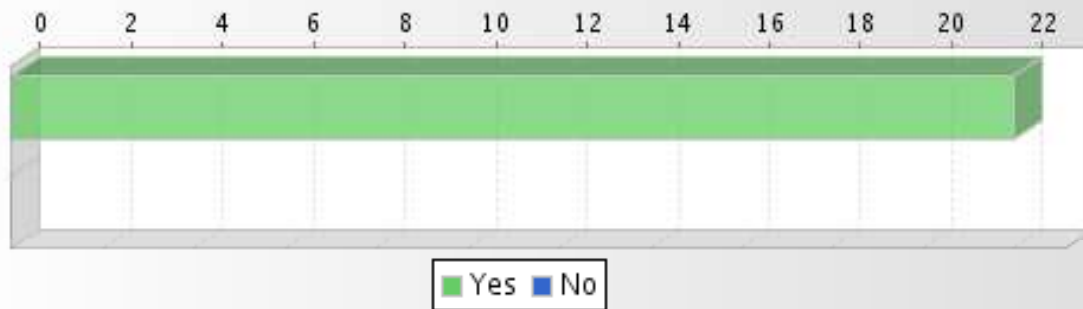
Executive Summary of Key Findings

- ◆ All 22 respondents indicated that their discussions with suppliers have included design changes, manufacturing capacity, and material procurement plans
- ◆ Increase in costs and the potential for price and supply uncertainty were the most frequent impacts expected by respondents
- ◆ Almost a quarter of all respondents sole-sourced their distribution transformers and over 40% of respondents have more than 3 suppliers
- ◆ Single Phase Pad transformers were the most compliant of all designs, while Three Phase Overhead pole transformers were the least compliant with the new standards
- ◆ Of the companies impacted by the new rule, actions being taken to manage the higher cost of the heavier compliant transformer designs include:
 - Standardization/consolidation of SKUs
 - Working directly with manufacturers to understand and plan for full impact. Working with current jurisdictions to demonstrate added cost and seek recovery
 - Rehabbing more transformers and reviewing transformer repair options to extend life of transformers
 - Developing and analyzing a business case that supports stocking up on non-DOE compliant units in bulk prior to the mandate and sourcing 2010 - 2012 business as early as possible in order to become part of manufacturers "base-loading"
 - Initiating engagement between engineering and the manufacturers engineering to ensure designing the most cost / quality efficient units
 - Continually working with suppliers to mitigate "controllable" cost variables (transportation, overhead costs, etc.)
 - Initiating market hedging
 - Reviewing specs with all suppliers to see the magnitude of units that may require re-engineering
 - Developing a comprehensive transformer strategy to include re-built units
- ◆ Over 50% of the respondents have not calculated the impact of larger poles, pads and other components necessitated by heavier transformer designs
- ◆ Within the next 6 months, over 50% of the respondents will be planning to renegotiate current contracts with their suppliers
- ◆ Almost 40% of survey respondents have not accounted for the financial impact of the new standards

Detailed Survey Results

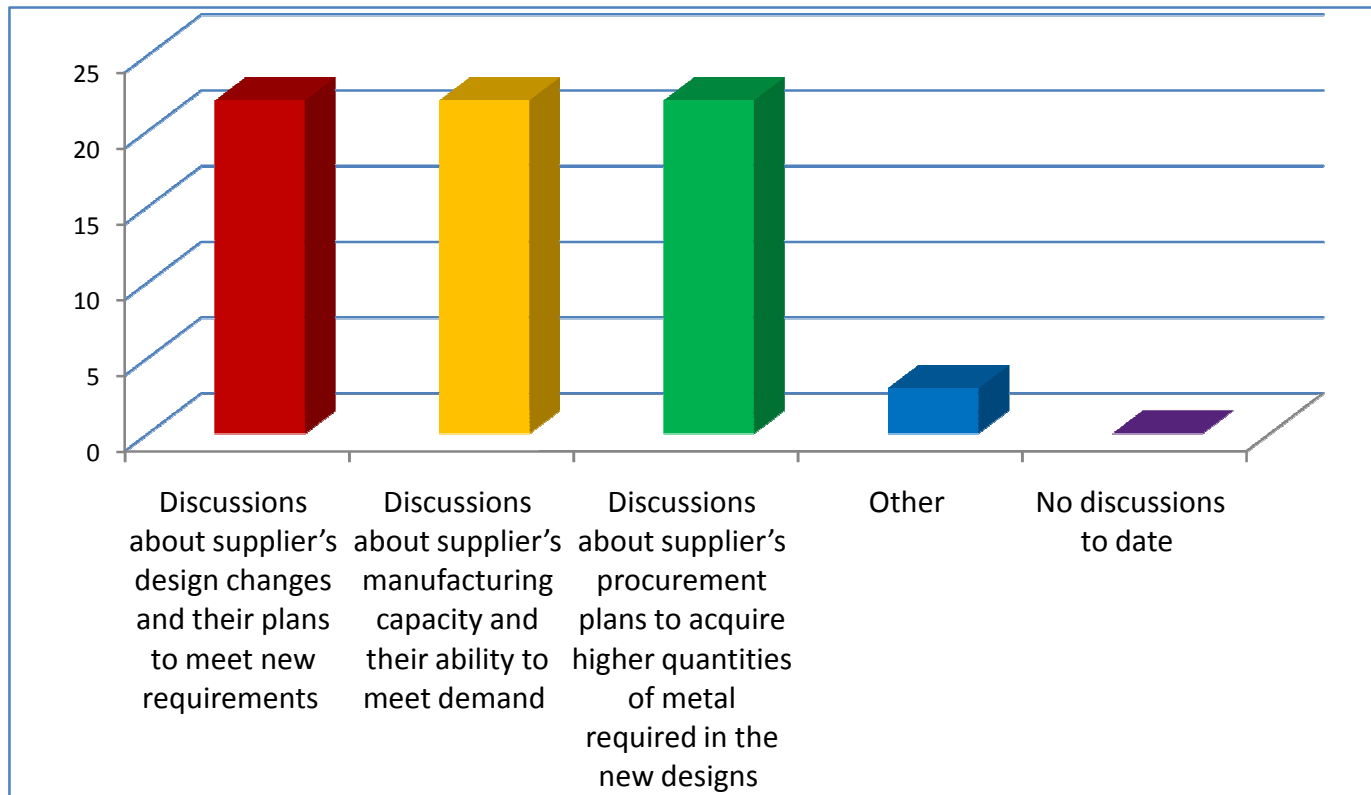
Question 1: Knowledge of DOE rule

Are you aware of the new DOE (Department of Energy) "Final Rule" published for the distribution transformers Energy Conservation Standard Rulemaking that goes into effect January 1, 2010?



All 22 respondents were aware of the DOE "Final Rule."

Question 2: Discussions with suppliers

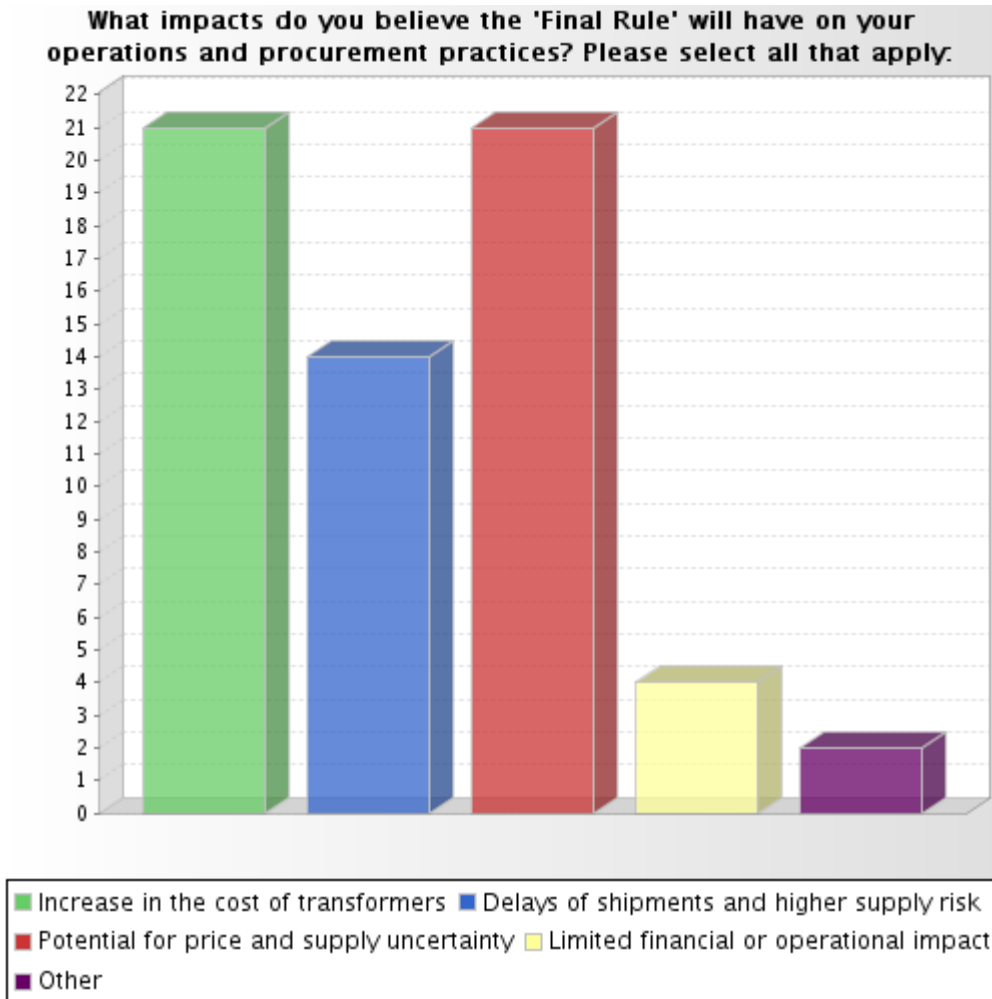


"Other" Responses

- Transition plan to new DOE requirements.
- Alternate sourcing options, load control, additional pricing impacts.
- Footprint size and weight.

All 22 respondents indicated that their discussions with suppliers included design changes, manufacturing capacity, and material procurement plans

Question 3: Impacts



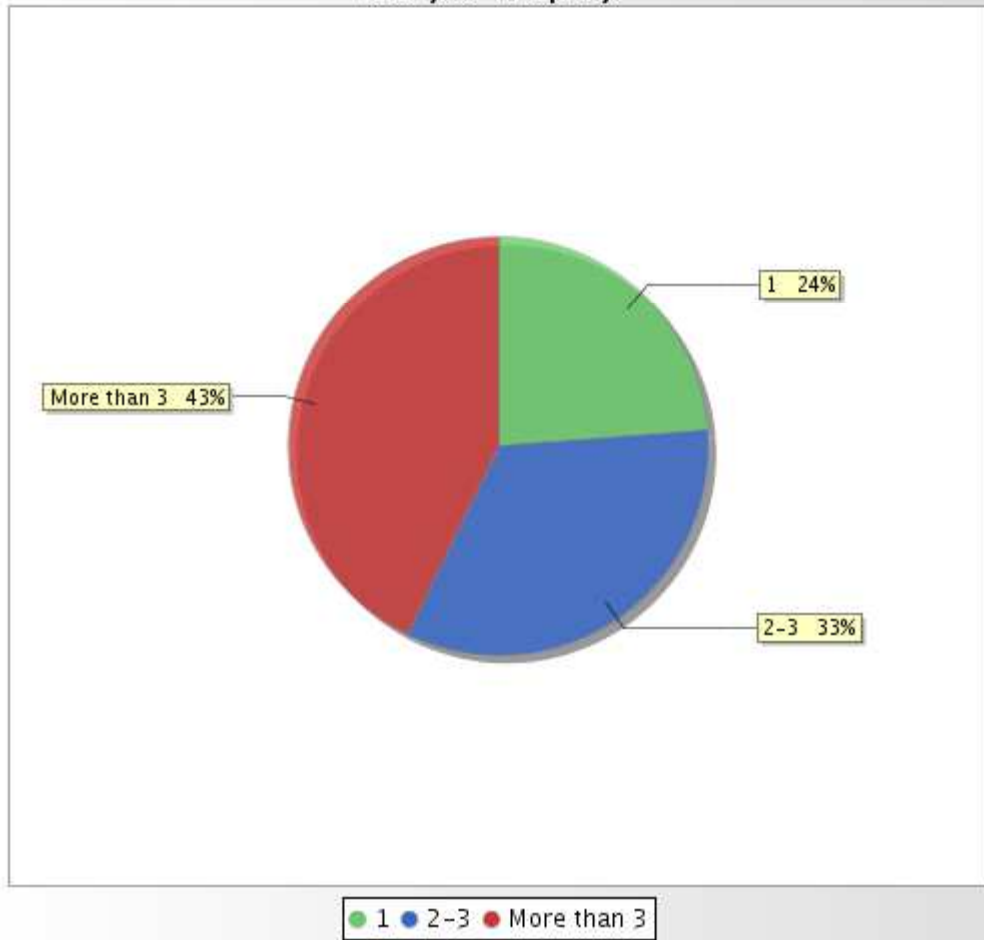
"Other" Responses

- New construction standards due to larger size of Transformers.
- Will still be subject to market conditions.

Increase in costs and the potential for price and supply uncertainty were the most frequent impacts expected by respondents.

Question 4: Number of suppliers

How many suppliers of distribution transformers are under contract with your company?



Almost a quarter of all respondents sole-sourced their distribution transformers. Over 40% of respondents have more than 3 suppliers.

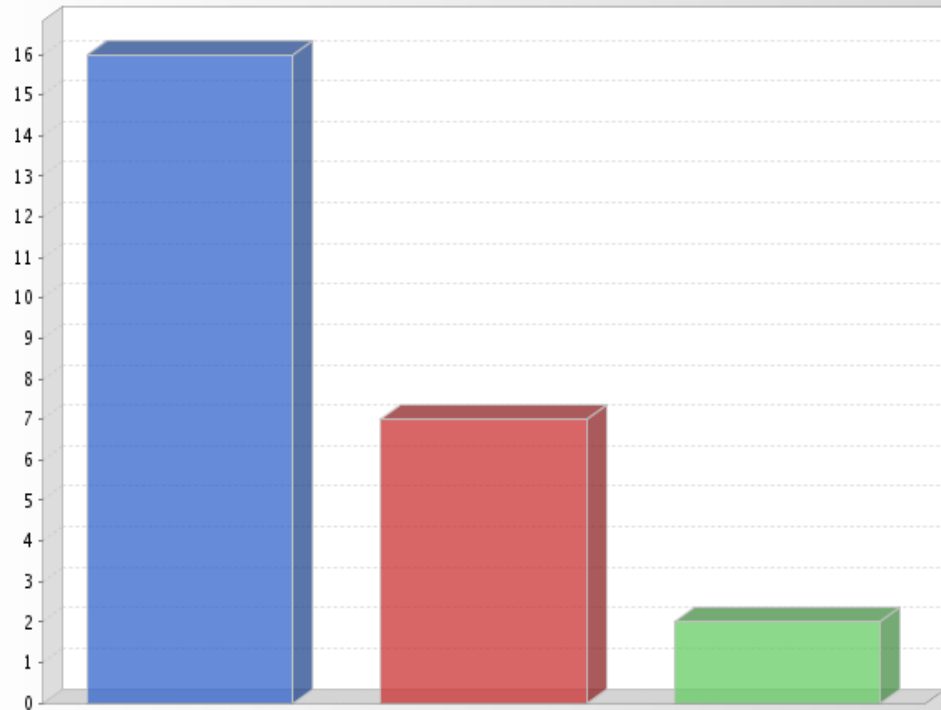
Question 5: Percentage of compliant designs

Using mean data, Single Phase Pad transformers were the most compliant of all designs, while Three Phase Overhead pole transformers were the least compliant with the new standards.

What percentage of your distribution transformer designs are in compliance with the "Final Rule?"	Mean	Response Total
Single Phase Overhead Poles	37.4	<u>20</u>
Single Phase Pads	42.1	<u>18</u>
Three Phase Overhead Poles	20.8	<u>12</u>
Three Phase Pads	46.8	<u>19</u>
Underground	27.8	<u>9</u>
Network	40.6	<u>8</u>
Total # of respondents 22 . Statistics based on 21 respondents 0 filtered; 1 skipped.		

Question 6: Actions being taken

Please indicate which of the actions your company is taking to address these new standards:



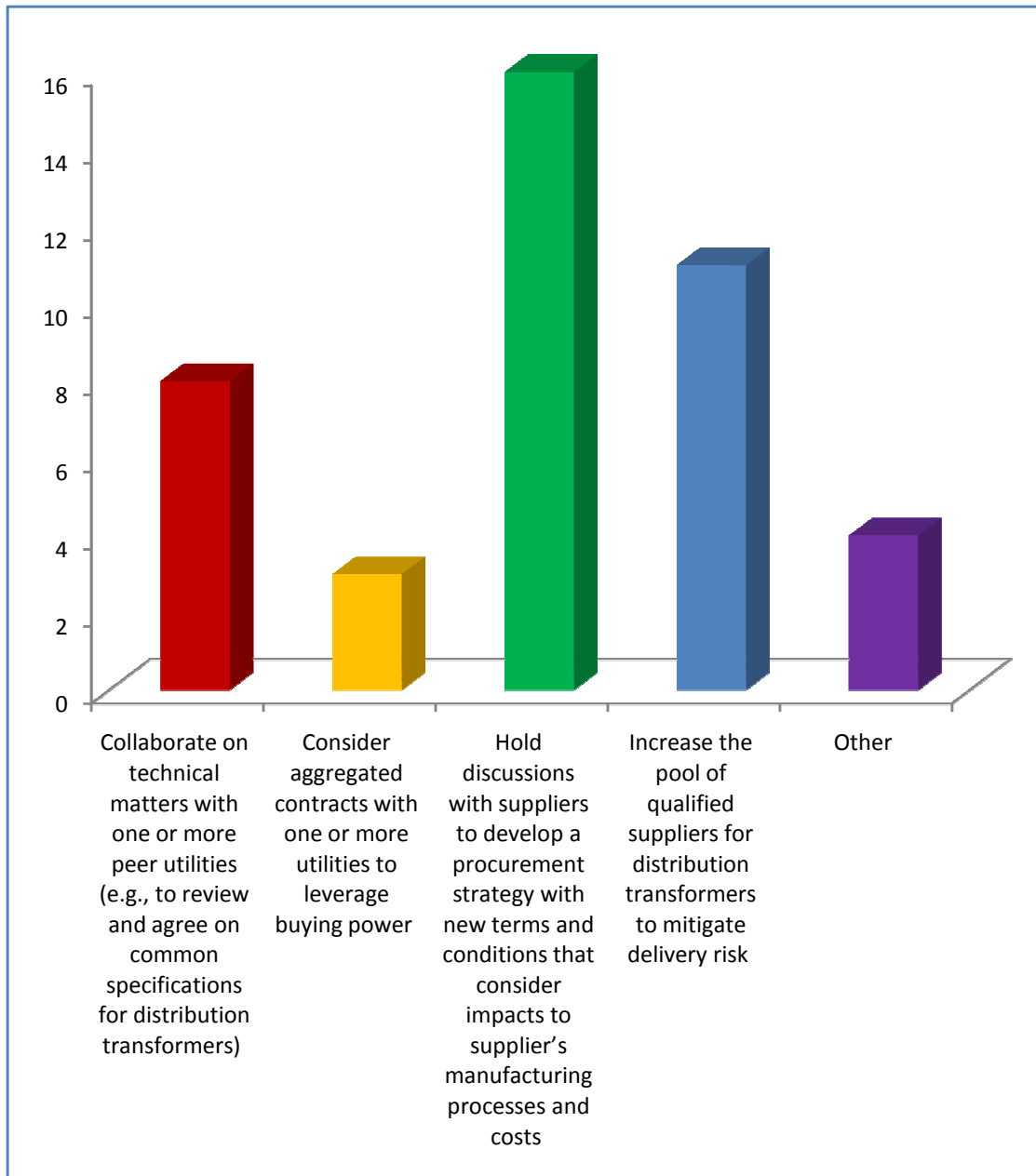
■ Begin the engineering effort to redesign the non-compliant types
 ■ Other
 ■ Stock up on current designs to avoid buying the potentially higher cost redesigned transformers.

"Other" Responses

- We are awaiting information from Suppliers regarding the potential impact to our company.
- We have visited our current contract suppliers and continue to have discussions with them to keep informed of changes and what is happening with other utilities.
- We are currently analyzing the economics of stocking up on current designs
- Re-evaluating standards and inventory levels.
- Stocking up is being discussed but no decisions have been made.
- Begin ordering new DOE units in 2009.

Most respondents are redesigning non-compliant types of designs.

Question 7: Strategies under consideration



"Other" Descriptions

- Purchase units in 2008 to secure availability of units.
- Repair more units. More efficient use of existing units returned to stock.
- Aggregating multiple operating company requirements.

The most common strategy under consideration by respondents is holding discussions with suppliers with new terms that account for the supplier's manufacturing processes and costs.

Question 8: Actions to manage impacts

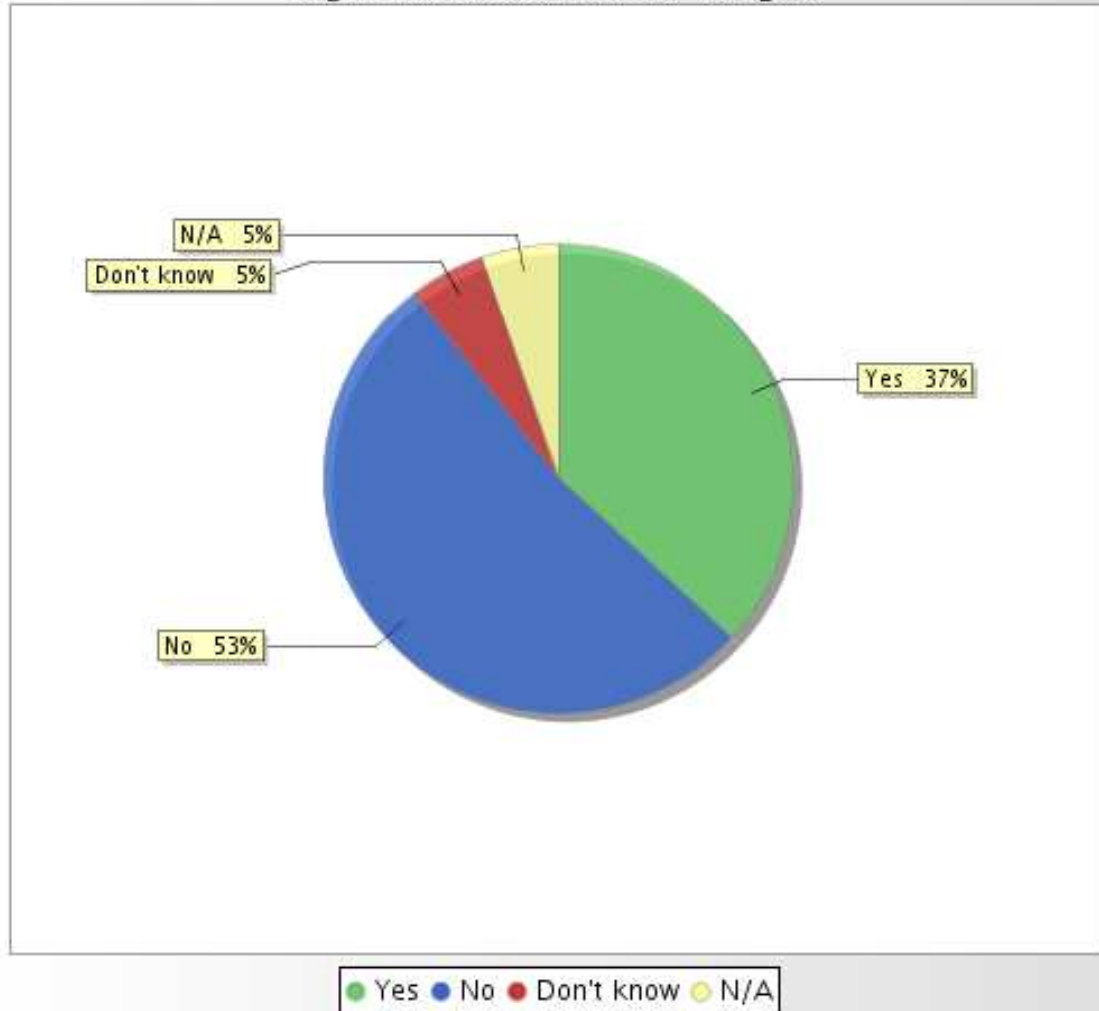
What are some actions your company is taking to manage the higher cost and the financial impact for the heavier compliant transformer designs?

WRITTEN RESPONSES

- A. Developing and analyzing a business case that supports stocking up on non DOE compliant units in bulk prior to the mandate. Sourcing all of our 2010 - 2012 business as early as possible in order to become part of manufacturers "base-loading". Initiating engagement between our engineering and the manufacturers engineering to ensure we are designing the most cost / quality efficient units. Continually working with suppliers to mitigate "controllable" cost variables (i.e. transportation, overhead costs, etc.).
- B. For one of our operating company, over 97% of currently purchased transformers meet or exceed the 2010 DOE standards. For another operating company, we are beginning to contact the manufacturers to determine the technical impacts of these standards.
- C. Once we decide to purchase the higher efficiency transformers, we will initiate market hedging.
- D. Reviewing transformer repair options to extend life of transformers
- E. Developing a comprehensive transformer strategy to include re-built units.
- F. We have considered rehabbing more transformers.
- G. Standardization / consolidation of SKUs.
- H. Until we have some information on the physical size and weight of the compliant transformers we cannot determine the required changes to our construction standards and the overall financial impact.
- I. We are currently reviewing our specs with all of the suppliers to see what the magnitude of units that may require re-engineering will be. Then we will work with the companies to create some agreements going forward.
- J. Working directly with manufacturers to understand and plan for full impact. Working with current jurisdictions to demonstrate added cost and seek recovery.
- K. Our designs were mostly compliant and required little cost impact to meet the new standards.
- L. We should not see significant changes to our transformer designs as most of our units already comply. We do expect higher costs but mainly due to the constraints on the raw materials.
- M. Still developing a strategy.
- N. None at this time as we do not know the final size and weights of the new designed units.

Question 9: Financial impact calculation

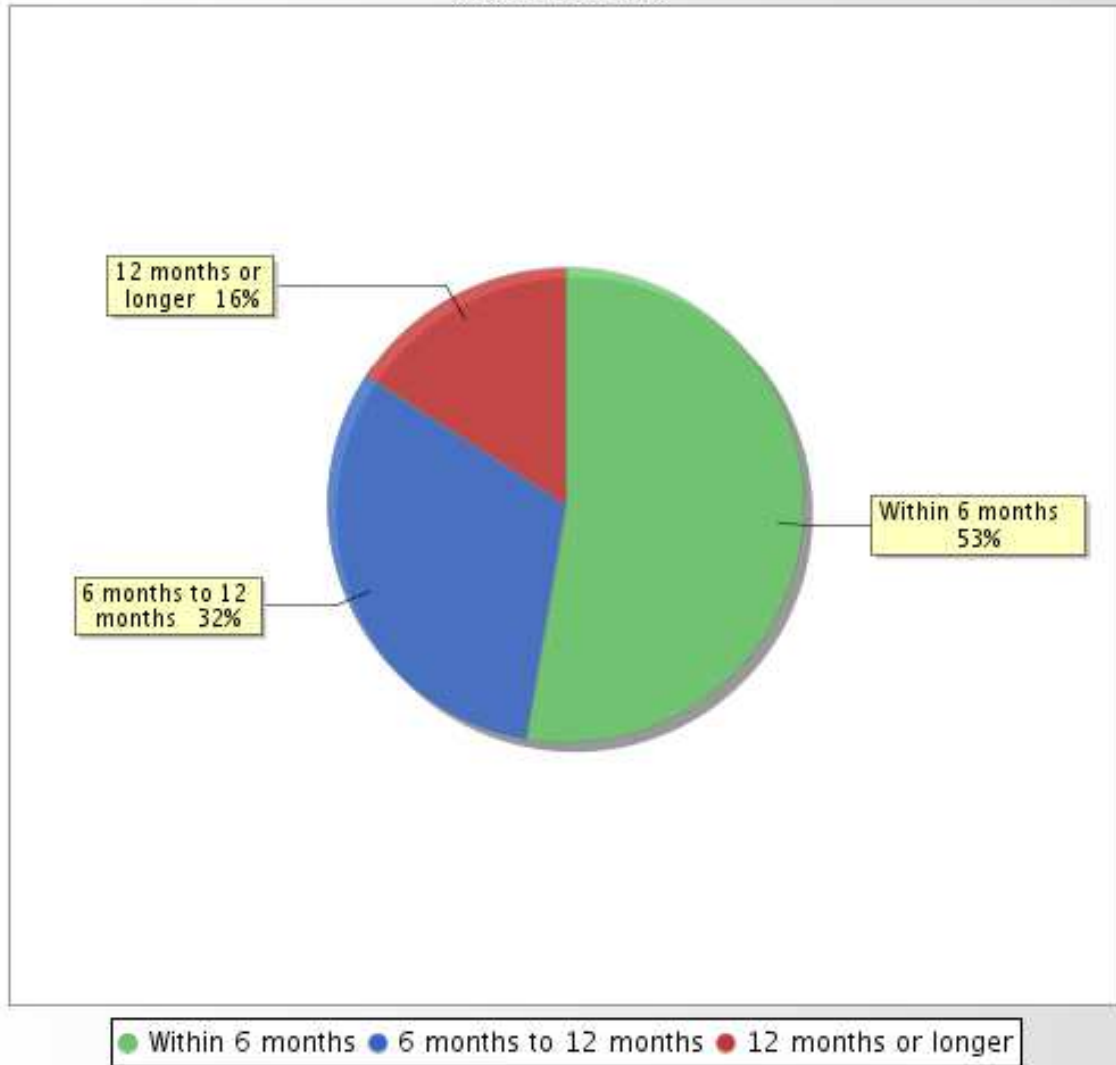
Has your company calculated the financial impact of the larger poles and pads and other components that will be required for the new larger heavier transformer designs?



Over 50% of the respondents have not calculated the impact of larger poles, pads and other components necessitated by heavier transformer designs.

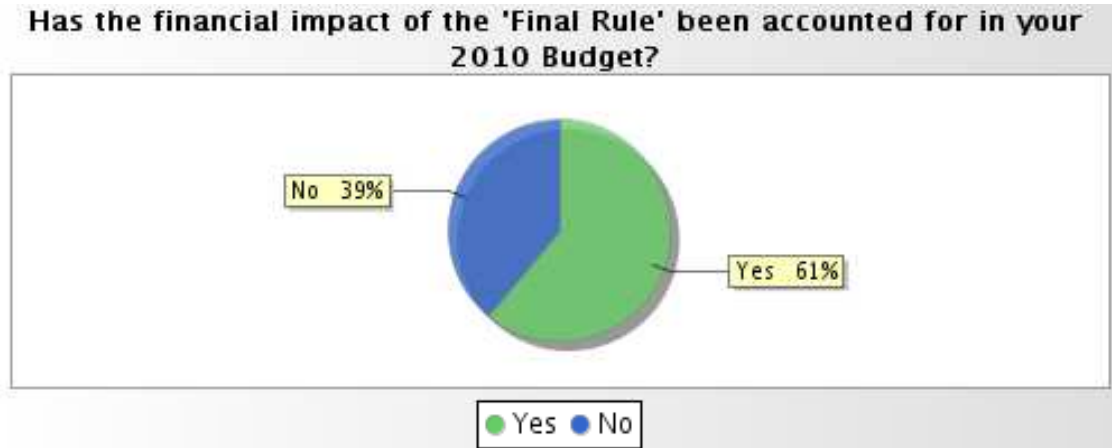
Question 10: Timeframe for renegotiations

When do you plan to renegotiate current contracts for distribution transformers?



Within the next 6 months, over 50% of the respondents will be planning to renegotiate current contracts with their suppliers.

Question 11: Accounting for financial impact



Almost 40% of survey respondents have not accounted for the financial impact of the new standards.

END OF SURVEY

Next Steps for Procurement Professionals

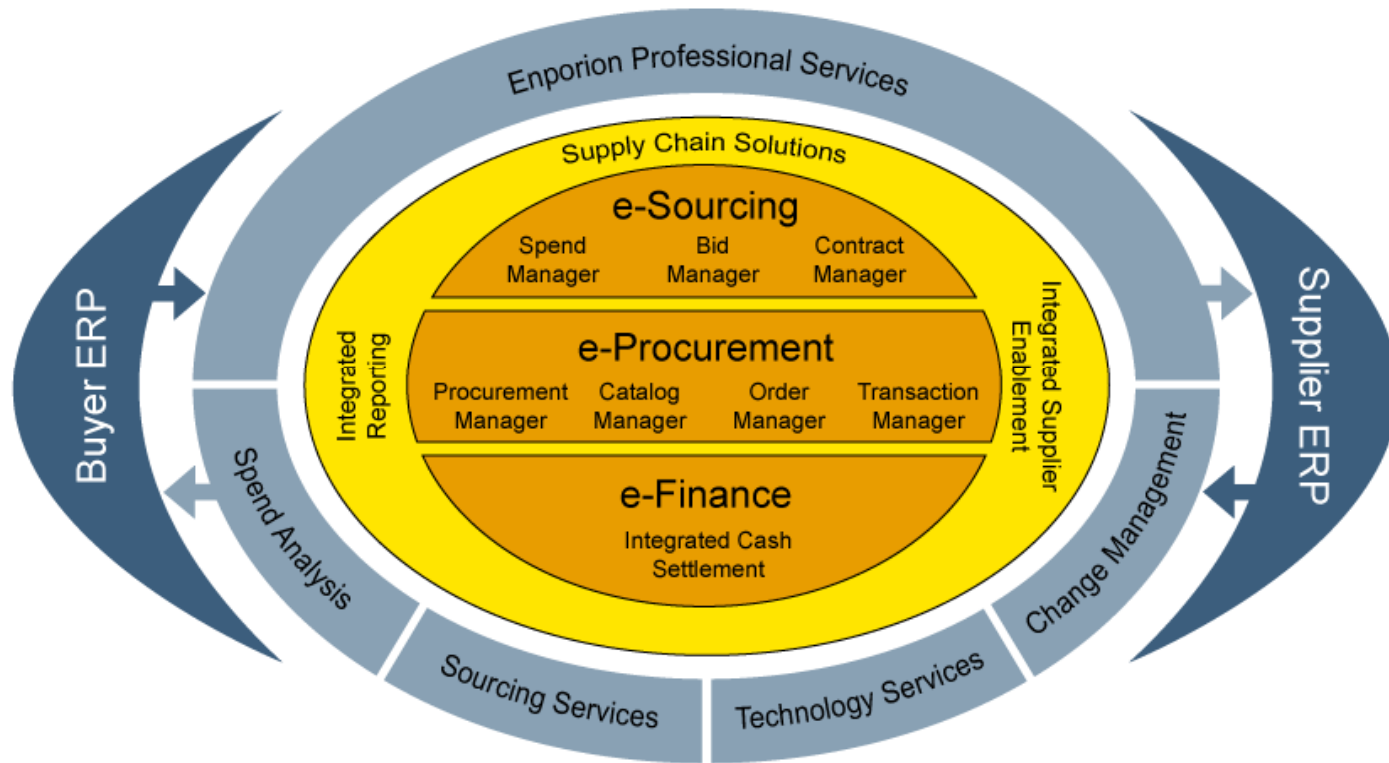
- ◆ Almost a quarter of all respondents sole-sourced their distribution transformers and over 40% of respondents have more than 3 suppliers
 - ➔ For companies that are sole-sourcing their transformers, there may be a benefit in expanding the pool of suppliers
 - ➔ For companies that are using more than 3 suppliers, it may be easier and resource effective to manage cost and supply impacts by negotiating with 2-3 suppliers rather than with a larger number of suppliers

- ◆ Single Phase Pad transformers were the most compliant of all designs, while Three Phase Overhead pole transformers were the least compliant with the new standards
 - ➔ Focus on the least compliant of designs: Three Phase Overhead pole transformers

- ◆ Some innovative actions and steps that can be taken to manage the higher cost of the heavier compliant transformer designs include:
 - ➔ Standardize and consolidate designs
 - ➔ Work closely with manufacturers
 - ➔ Investigate cost recovery potential
 - ➔ Increase rehabbing additional transformers and repair options
 - ➔ Source new designs as early as possible to become part of manufacturers "base-loading"
 - ➔ Initiate engagement between engineering and manufacturers engineering to design the most cost/quality efficient units
 - ➔ Investigate use of aggregated Sourced Agreements for collaborating with other utilities to gain leverage with suppliers

- ◆ Almost 40% of survey respondents have not accounted for the financial impact of the new rule
 - ➔ Begin calculation of the financial and operational impacts of the new rule

Enporion is a supply chain management solutions and services company, providing strategic sourcing and e-procurement applications, and related professional services.



This survey was conducted by the Professional Services Group at Enporion. Contact Subba Nishtala at (813) 864-8144 or snishtala@enporion.com for additional information.

Appendix – Survey Questions

Appendix: Complete Survey Questions

1. Are you aware of the new DOE (Department of Energy) "Final Rule" published for the distribution transformers Energy Conservation Standard Rulemaking that goes into effect January 1, 2010?
 - Yes
 - No
2. What type of discussions, concerning the new "Final Rule," have you had with your current suppliers? Please select all that apply:
 - Discussions about supplier's design changes and their plans to meet new requirements
 - Discussions about supplier's manufacturing capacity and their ability to meet demand
 - Discussions about supplier's procurement plans to acquire higher quantities of metal required in the new designs
 - No discussions to date
 - Other _____
3. What impacts do you believe the "Final Rule" will have on your operations and procurement practices? Please select all that apply:
 - Increase in the cost of transformers
 - Delays of shipments and higher supply risk
 - Potential for price and supply uncertainty
 - Limited financial or operational impact
 - Other _____
4. How many suppliers of distribution transformers are under contract with your company?
 - 1
 - 2-3
 - More than 3

Appendix: Complete Survey Questions (Cont'd)

5. What percentage of your distribution transformer designs are in compliance with the “Final Rule?”
- Single Phase Overhead Poles _____
 - Single Phase Pads _____
 - Three Phase Pads _____
 - Underground _____
 - Network _____
6. Please indicate which of the actions your company is taking to address these new standards:
- Stock up on current designs to avoid buying the potentially higher cost redesigned transformers
 - Begin the engineering effort to redesign the non-compliant types
 - Other _____
7. Which of the below strategies being considered (or what you would consider) to address the impacts of the new efficiency requirements? Please mark all that apply:
- Collaborate on technical matters with one or more peer utilities (e.g., to review and agree on common specifications for distribution transformers)
 - Consider aggregated contracts with one or more utilities to leverage buying power
 - Hold discussions with suppliers to develop a procurement strategy with new terms and conditions that consider impacts to supplier’s manufacturing processes and costs
 - Increase the pool of qualified suppliers for distribution transformers to mitigate delivery risk
 - Other _____

Appendix: Complete Survey Questions (Cont'd)

9. What are some of the actions your company is taking to manage the higher cost and the financial impact for the heavier compliant transformer design?
10. Has your company calculated the financial impact of the larger poles and pads and other components that will be required for the new larger heavier transformer designs?
 - Yes
 - No
 - Don't Know
 - N/A
11. When do you plan to renegotiate current contracts for distribution transformers?
 - Within 6 months
 - 6 months to 12 months
 - 12 months or longer
11. Has the financial impact of the "Final Rule" been accounted for in your 2010 budget?
 - Yes
 - No