

Technology Roadmap for the Electricity Supply Industry

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Abstract

The Electricity Technology Roadmap represents a collective vision of the opportunities for electricity to serve society in the 21st century through advances in science and technology. It remains a living document, owned by all stakeholders in the electricity enterprise, and is intended to be periodically updated.

Electricity’s global impact can be—and, we believe, must be - even greater in the 21st century, but only if critical development and investment decisions are made now to transform the electricity system for the pressing needs of the new century. There are three overriding imperatives:

- Meet the precision-power requirements of the emerging digital economy
- Create the clean-energy portfolio required for long-term environmental sustainability
- Accelerate access to the benefits of electricity among all the people of the world

One of the most important reasons for a Technology Roadmap is to promote a long-term vision for the technology needs of the industry. This vision can then be formulated into milestones or destinations. This allows the opportunity for all stakeholders and industry players to have a better appreciation on the long-term vision and enable them to contribute positively to the realization of that vision. In short, a Technology Roadmap provides for a consistent focus on the major destinations. Such focus is important to steer the industry to greater heights of excellence and achievement.

We face the 21st century’s burgeoning needs for energy largely with the capabilities of the past. The decades before us will place radically different and more challenging demands on the electricity system than can be met with current technology and infrastructure investment rates. But we lack a clear vision of the new opportunities open to us and the dangers of inaction. What we do in the next decade to increase the functionality, value, and availability of electricity worldwide will make a dramatic difference in our shared future.

Keywords

Technology roadmap; vision; destinations; strategic planning

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