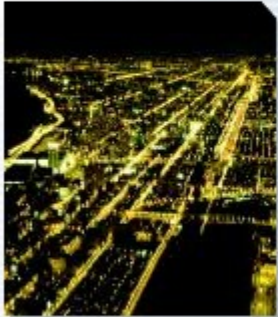# 2011 Smarter Planet Innovation Awards

Smarter Energy

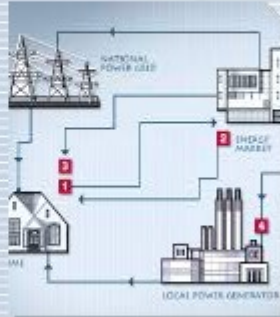## A Faculty Award Program Sponsored by the IBM Academic Initiative

Smarter Power

Efficient Grid Models for a Smarter Planet

Smarter Cities: Powering the City

The Intelligent Utility Network

Smarter Power for a Smarter Planet

IBM is pleased to announce the 2011 Smarter Planet Faculty Innovation Award program, a competition designed to encourage the thoughtful development and incorporation of Smarter Energy (also referred to as Power or Grid) skills into Business, Public Planning/Safety, Engineering and IT curriculums.

BACKGROUND: Accelerating into a new era in energy requires analytics to generate both insights and new/improved power generation methods and delivery such as micro grids, smarter nuclear power and grid security. Additionally, analytics, asset management and other technologies are making wind farms smarter, adding momentum to this fast-growing industry and spurring new ones. While electric cars are transforming traditional energy and auto industry processes to take a road trip together toward e-mobility.

The IBM Academic Initiative is seeking to co-develop Smarter Energy curricula will help students recognize how through developing new solutions which are instrumented, interconnected and intelligent, our energy can be made smart. Students will be introduced to concepts which show how energy can be managed like the complex global system it is and how an intelligent utility system actually looks a lot more like the Internet than like a traditional grid. They will experience how with advanced analytics, data collected around energy consumption can be turned into insight, so that better decisions can be made in real time. Decisions by individuals and businesses on how they can consume more efficiently. Decisions by utility companies on how they can better manage delivery and balance loads. Decisions by governments and societies on how to preserve our environment. The whole system can become more efficient, reliable, adaptive...smart. They will be introduced to skills needed for jobs in digitizing the grid and in related industries such as alternative energy and automotive. Additional students should be exposed to concepts which could enable new forms of industrial innovation by creating exportable skills, resources and technology. As creating new business models for a changing world of energy is a priority, students will need to understand dependencies on transformations in governmental policy shifts, emergence of new technologies and changing consumer demands. IBM is seeking to partner with universities who desire to create and teach innovative curriculum which develops professionals who have the combination of business/industry and technical skills needed to lead this transformation now and into the future.

Note: To see specific examples that contribute to Smarter Energy, visit IBM's Smarter Planet website.

A course module which enables Smarter Energy is defined as one which combines the disciplines of 1) identifying a business or societal need with 2) need for open standards based communications based services and technologies and 3) need for social-organizational change. The course module must also demonstrate the interactions of diverse types of complex service systems within the end-end solution or approach being taught.

The materials should be organized so that they may be used in whole or in part to teach students in lecture or on-line university offered courses and/or train internal university employees. All materials should be reproduction-ready and be electronically deliverable. Teaching materials should include:
- chapter-by-chapter course notes
- presentation slides and/or multimedia files for easily presenting the material to students
- course data sets for easily demonstrating the concepts being discussed
- practice exercises to enhance students' comprehension

The proposed curriculum should ideally build towards the combination of following business + IT skills:
- Customer service and/or integrated value chain best practices
- IT best practices
- Creative and critical thinking, analysis and synthesis
- Communications across disciplines, including leadership, collaboration, and teaming
- Business case development and analysis
- Business project management
- Solution service strategy through understanding value creation
- Solution service design and modeling
- Solution service management and lifecycles to ensure quality

The proposal should include an advisory listing of different general methods and techniques which are recommended to be covered for each skill and corresponding technologies.

Materials submitted by award winning recipients will be made publicly available at no cost to other universities through the IBM Academic Initiative and may be citied on ibm.com and in workshops, conferences, and publications. Awards will be US $10,000.

To qualify for these competitive awards, the submitter must be a full-time faculty member at an accredited college or university and a current member of IBM's Academic Initiative program.

How to submit proposals:

PROCESS: Your proposal should clearly state and outline the goal, approach and benefit of the curriculum. Please denote any open standards/technologies and IBM products/technologies which will be featured. Each proposal should also include an outline plan showing milestones, current funding (if any), the staff involved, and any interested collaborators or sponsors.

Proposals will be reviewed based on the following criteria:
- Impact in demonstrating the problem/solution for Smarter Energy IT solutions and open source technologies
- Simplicity of introducing need for IT reference architectures
- Promotion of innovative and systems thinking
- Multi-discipline focus
- Membership in IBM Academic Initiative program

Submitted entries will be judged by a panel of experts from IBM. IBM assumes no responsibility for computer system, hardware, software, network program, or other errors, failures, delays or malfunctions of any kind, whether human or technical in nature, in the transmission or receipt of emails or proposals. Note: The proposal review committee will be announced shortly.

After the proposal committee reviews and identifies the winners, the winners will be assigned an IBM liaison who will work and collaborate with their assigned research group, monitor their progress, and provide helpful insight to improve the final submission. Moreover, the needed software and tools will be available to the winners through IBM's Academic Initiative. As this is a collaborative effort, the materials produced by award winners will be shared publicly available at no cost to other universities through the IBM Academic Initiative and may be citied on ibm.com, workshops, conferences, and publications.

To submit a nomination, send an email to: **awards@us.ibm.com** with the subject line "Smarter Energy Faculty Innovation Award proposal request".

You will receive an e-mail response with a link to a website where you will be able to submit your proposal.

Key dates - deadline times are 11:59 PM U.S. Eastern Time. Carefully note deadlines.

May 16, 2011	**Online submission opens. Email requests sent before this date will be rejected.**
September 27, 2011	**Deadline for initiating a nomination.**
October 3, 2011	**Deadline for submitting a proposal.**
Nov 2011 - Feb 2012	**Award winners notified by e-mail.**