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Advocating for a Smarter Grid to Enable our Energy Future

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Wir suchen die Internationalen für die Jahre 1975 bis 1980

Mit den Nachwuchsfußballern ist es genauso wie mit den Schuhen: Man kann nie genug haben. Darum appelliert Admira-Energie an die Eltern: Schickt uns eure Buben. Bei uns sind sie wenigstens gut aufgehoben!

Wer spielt wo?

Der 1. September ist ein wichtiges Datum im Leben aller Nachwuchskicker.

Wer am 1. September 1969 das

endet hat, kann im Knabenbewerb spielen!

Admira sucht insbesondere 14- bis 16jährige für die Jugend und ganz „junges Grünzeug“ (ab acht Jahren) für die B-Knaben-Elf!

Bestens behütet

Sie brauchen keine Sorge zu haben, daß wir auf Ihre Buben nicht ordentlich aufpassen. Abgesehen von den vier Jugendtrainern kümmern sich um den jüngsten Nachwuchs auch noch „Cheftrainer“ Malatinsky und unsere

Für B-Knaben (8 bis 12 Jahre alt): Nur einmal wöchentlich, u. zw.: jeden Mittwoch, Beginn 15 Uhr

Jugend als Vorspiel

Einem oft gehegten Wunsch unserer Anhänger folgend, werden wir von nun an die Meisterschaftsspiele unserer Nachwuchsmannschaften vor den Meisterschaftskämpfen der Ersten ansetzen! Das gilt zunächst für heuer.

Die Mutter als Zeugwart

Nicht nur eine erzieherische Maßnahme, sondern auch eine Folge des Personalmangels ist es, daß wir den Spielern unserer Nachwuchsmannschaften — sobald sie dem Kader angehören — Taschen mitgeben, in denen ihre gesamten Trainings- und Wettspielgarnituren stecken. Sie werden dazu angehalten, ihr Zeug selbst zu pflegen. In der Praxis wird es aber wohl so ausschauen, daß die Frau Mama zum Zeugwart avanciert!

Jugend auf Reisen

Fußballer lernen die weite Welt kennen. Davon bekommen schon die Nachwuchskicker einen Vorgeschmack. Admira-Energie

Wir werden ihn nie vergessen!

Admira-Energie hat eines der ältesten Mitglieder verloren. Im begnadeten Alter von 82 Jahren verstarb am 18. August unser Ehrenmitglied August Wurm. Seit 60 Jahren gehörte „Vater“ Wurm unserer Mitgliederkartei an. 1929 wurde dem treuen Freund die Ehrenmitgliedschaft zuerkannt. Vor fünf Jahren erhielt er das goldene Admira-Abzeichen.

Wir werden August Wurm stets ein ehrendes Andenken bewahren.



Früh krümmt sich, was den Haken beherrschen will...

nächsten Moment humpelt Fußballkrieger zum Gottesmen. So hat unser Vere Dr. Hans Behawetz ar wieder einiges zu tun. aber — wenn man von konvaleszenz nach einer kusoperation absieht — kleine „Wehwehchen“. Se ser Dauerpatient Walter ist derzeit fit...

- Cihal trainiert nach Meni kusoperation bereits leicht.
- Marik, Oberschenkelzerrung, fällt noch zwei Wochen aus.
- Miletits und Streif, leichte Blessuren, sind nächste Woche wieder fit.

My other credentials... cont'd



The world's electricity network will change more in the next 20 years than it has in the last 100



The decisions made in the next five years will determine whether or not the transition is considered a success

Globally, the energy and utilities industry faces tremendous challenges and opportunities

36.8%

projected growth in worldwide energy demand by 2030

\$150 billion/year

lost due to outages and interruptions in electric power (just in the U.S.)

170 billion

kilowatt-hours wasted each year by consumers due to insufficient power usage information

15% reduction in peak loads

when consumers were offered the opportunity to save an average of 10% on their electric bills



1/4

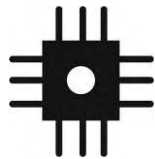
proportion of worldwide CO₂ emissions created by power generation, the largest man-made source

\$70 billion

in infrastructure spending could be saved over the next 20 years through better management of existing assets (in the U.S. alone)

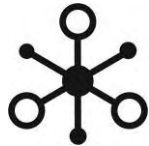
Worldwide transformation of the electric system is not unique

Intelligence is being infused into the way the world works



Our world is becoming

INSTRUMENTED



Our world is becoming

INTERCONNECTED



Virtually all things, processes, and ways of working are becoming

INTELLIGENT

Smart grids: a clear national priority in the U.S.

“It is the policy of the United States to support the modernization of the Nation's electricity [system] . . . to achieve . . . a smart grid.”
Congress, EISA 2007

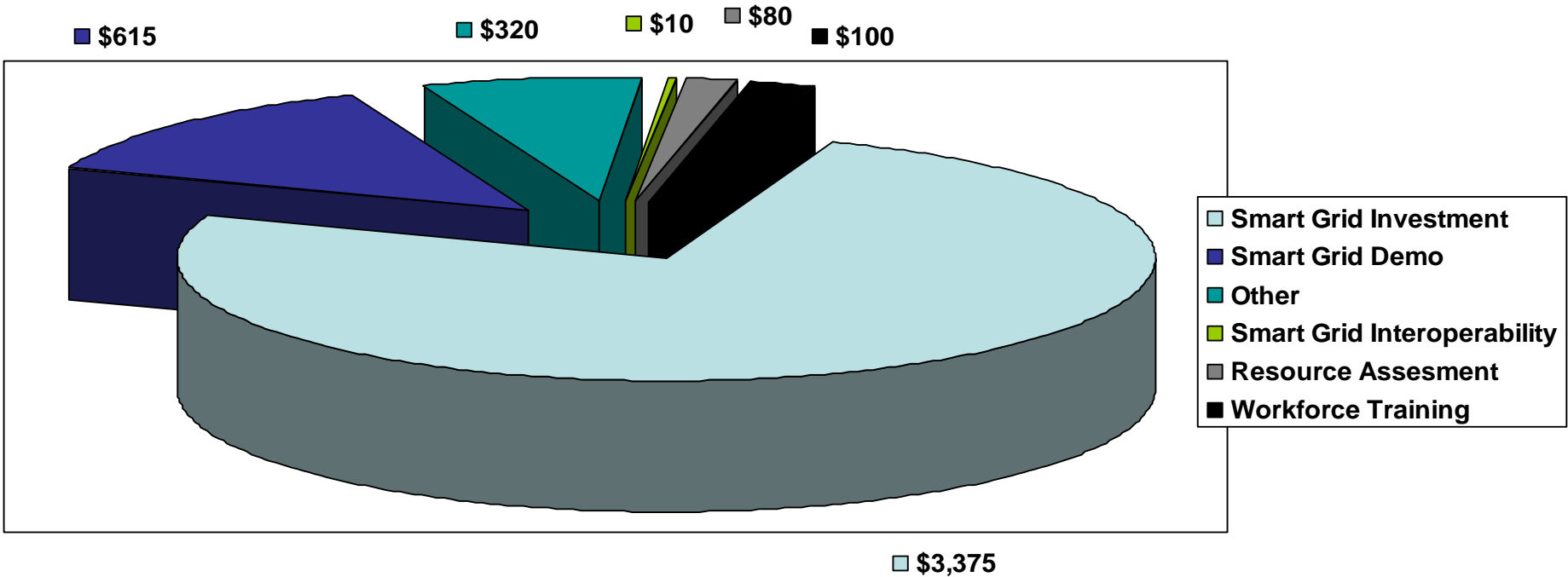


“We’ll fund a better, smarter electricity grid, and train workers to build it . . . ” U.S. President Barack Obama

“To meet the energy challenge and create a 21st Century energy economy, we need a 21st Century electric grid . . . ”
U.S. Secretary of Energy Steven Chu

“A smart electricity grid will revolutionize the way we use energy, but we need standards . . . ” U.S. Secretary of Commerce Gary Locke

ARRA: \$4.5 billion for grid modernization



Source: www.energy.gov/recovery

Energy and climate-change legislation in the U.S.

Despite numerous efforts, Congress has not passed comprehensive energy and climate change legislation. Recent activity includes:

- In 2010 the House and Senate energy committees passed several energy bills which invest in energy efficiency, conservation, renewable energy, and electric vehicles. None of these bills advanced.
- The new Congressional leadership has stated its commitment to clean energy but not clear what initiatives will move.
- The Federal Government is making significant investments in the Smart Grid through the American Recovery and Reinvestment Act of 2009 and the Energy Independence and Security Act of 2007.



GridWise vision is the foundation of the Alliance

GridWise vision is new way to think about how we generate, distribute and use energy - using advanced communications and up-to-date information technology, GridWise will improve coordination between supply and demand, and enable a smarter, more efficient, secure and reliable electric power system.

GridWise Alliance

The GridWise™ Alliance was formed in September 2003 by the signing of a joint declaration of six companies....Battelle, PJM Interconnection, Alstom, IBM, Sempra and Rockport Capital. The founders were committed to increasing knowledge among industry stakeholders, promoting understanding of the roles, benefits, and costs, and supporting R&D initiatives and public-private partnerships.

GridWise Principles – collective thinking on evolution of the grid

- 1) Empowered customers
- 2) Productive, secure and reliable system
- 3) Better customer rates and quality of service
- 4) Equitable markets and increased business opportunities
- 5) Environmental benefits

The GridWise Alliance advocacy approach

- Ensure smart grid seen as key enabler – means to an end
- Know how to describe benefits
- Engage stakeholders up-front
- Work on parallel State and Federal tracks
- Determine if policy is necessary

Key messages:

1. Invest in smart grids to increase efficiency and renewable energy
2. Smart grids enable for electric vehicles and EV infrastructure
3. Consumer access is important
4. Incentives are necessary for smart grid equipment and energy storage
5. NIST Interoperability Standards



Sample projects in the U.S.

Washington

- **Pacific Northwest National Laboratory:** Used intelligent measurement devices, smart appliances and a virtual marketplace to help manage stress in the electric grid, achieving a 50% reduction in short-term peak electricity distribution loads and a 15% reduction in overall peak loads.

Texas

- **Texas Common Portal:** Central data portal accepting 15-minute interval data from all smart meters already installed by the four investor-owned distribution utilities (CenterPoint Energy, Oncor, AEP-Texas, and Texas-New Mexico Power). Data are collected and updated daily.

Pacific Northwest National Laboratory Olympic Peninsula Project

- Started with demonstration project with 112 homes
- 10% average customer savings, 15% reduction in average peak load
- Follow-on project with 60,000 homes funded by US smart grid stimulus program



Smart Grid Information Clearinghouse

U.S. DoE initiative to develop and maintain a Clearinghouse Web site, answering questions from the public and distributing information about smart grid initiatives occurring nationwide



GridWise Alliance took an early leadership role in forging international Smart Grid relationships

Formalized with the launch of the Global Smart Grid Federation



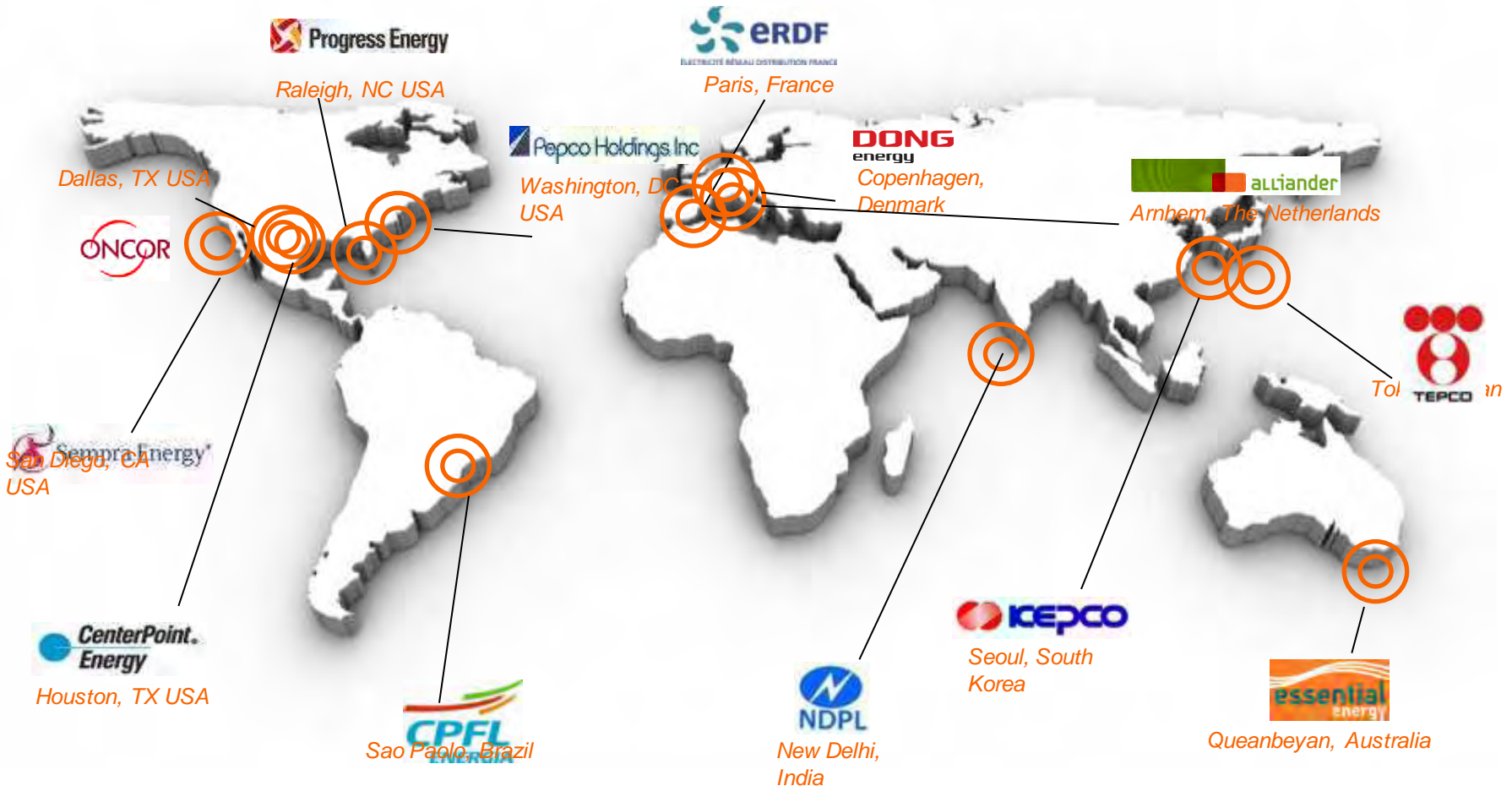
सत्यमेव जयते

Ministry of Power



Advancing Smart Grid progress for over 160 million consumers around the world

The Global Intelligent Utility Network Coalition



Enabling electric vehicles and renewable energy: The EDISON Project

The EDISON project consortium is developing an intelligent infrastructure that will make possible the large-scale adoption of electric vehicles powered by sustainable energy

EDISON

Electric vehicles in a
Distributed and
Integrated market using
Sustainable energy and
Open Networks



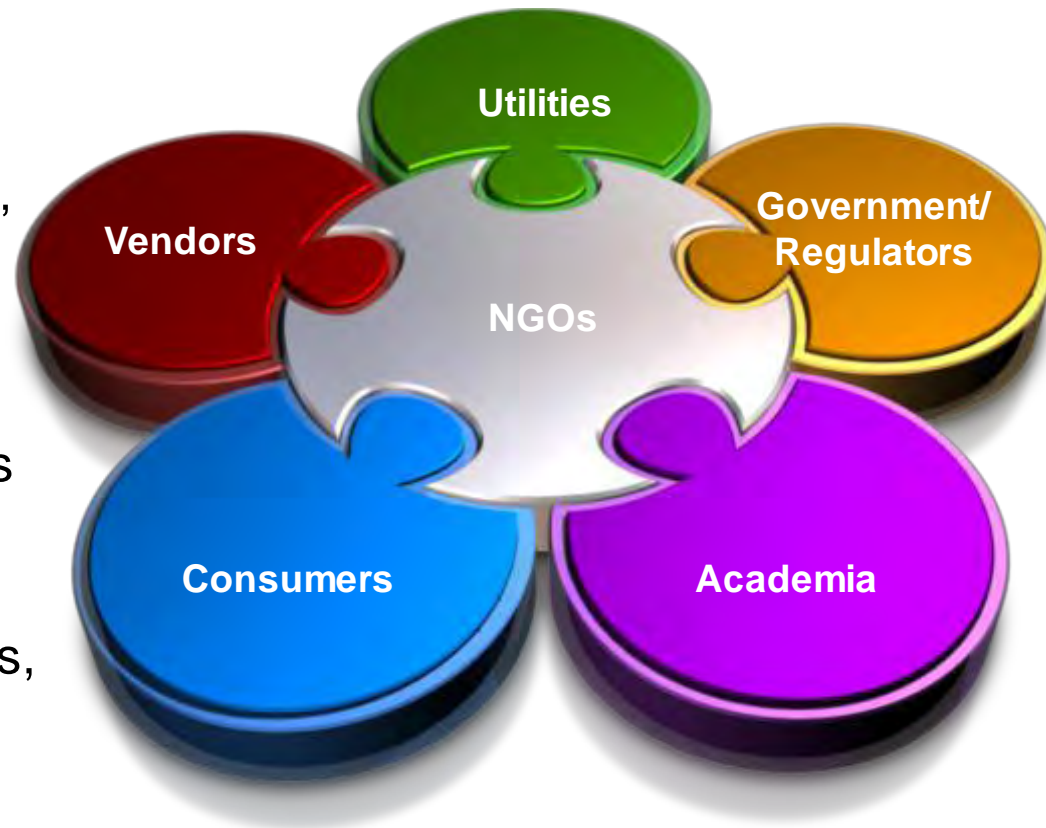
Developing smarter energy and water systems: Enemalta and Water Services Corp.

Malta is becoming the first country to implement an end-to-end smart electricity and water utility system



Lessons learned – thus far . . .

- It takes a movement – setting national vision drives smart grid focus and investment plan
- Early involvement of all stakeholders is crucial
- Seek collaboration with ‘adjacent’ alliances for more effective communication
- Broad policy menu – looking across Federal and State policies to support investments
- Focus on cost / benefit for all stakeholders: utilities, consumers, government, society
- Still a lot of issues to solve – energy bill, regulatory models, business models, standards



Create smart systems by design

Continue to emphasize standards

Develop sound policy

**Collaboration is critically important
for this transformational journey**

We've only just begun to uncover what is possible
on a smarter planet



Let's work together to drive real progress in our world

(Backup)

GridWise Alliance accomplishments

2003

- GWA formed by 6 founding members
- Series of National Workshops held

2004

- US DOE Creates GridWise Program and launches GridWise Architecture Council
- MOU with DOE to create a coordinated framework for collaborative efforts
- End year with 13 members

2005

- Work for funding for smart grid projects
- DOE funds R&D efforts

2006

- Refocus efforts on building support and developing legislative policy agenda
- End year with 19 members

2007

- GridWeek 2007 – inaugural event
- EISA 2007 includes extensive SmartGrid provisions

- Signed MOU with the GridWise Architecture Council
- Ends year with 41 members

2008

- Advocated for full implementation of EISA 2007
- Charter three additional work groups
- Input to Obama Transition Team on proposed stimulus package and energy policy
- Lead sponsor and Co-Chair of GridWeek 2008
- Eight GWA members asked to serve on EAC
- EAC Smart Grid Subcommittee led by GWA Chair
- Hired full-time President
- End year with 79 members

GridWise Alliance accomplishments

2009

- Created Smart Grid Job Reports
- Provide input to Congress on proposed new energy and climate legislation
- Expanded relationships with groups for which smart grids are/should be important
- Expanded the dialogue and cooperation with international smart grid groups
- Produced two new smart grid reports:
 - What is Missing in Our Fundamental Knowledge of Smart Grid Implementation
 - Handbook for Assessing Smart Grid Projects
- Expanded external smart grid communication efforts through national and trade press
- Successfully advocated for the inclusion of smart grid language in Senate and House energy and climate legislation
- End year with 110 members

2010

- Announced Inaugural GridWise Global Forum (Sept 21 -23), an international smart grid conference in Washington D.C. Co-Hosted with the Department of Energy
- Created Education and Workforce Work Group to address training and education issues facing the smart grid industry
- Successfully advocated to ensure smart grid investment grants would not be subject to federal income tax
- Engaged Congress in jobs bill discussion, advocated additional smart grid funding for Nation
- Founding member of the Smart Grid Consumer Collaborative
- Initiator of Global Smart Grid Federation, an association of national smart grid organizations
- Currently 150 members