

Secure Infrastructures Through Renewable Energy

By Erik Buschardt, Fall 2015, Webster University.



Topics of Conversation and Research

Current State of Events

Mideast Oil Fluctuations and Fears of Conflict

Iraq, Iran, Syria, etc.

2016 Campaign Promises, Promises, Promises!

Environmental Treaty Obligations (Paris 2015)

War over Limited Resources (Arctic Oil)

Busting Myths

What We Can Do About It

Obama's Proposals: *"We have multiplied wind power threefold, and solar power more than 20-fold" –@POTUS #ParisClimateConference #COP21*

Testbeds of Innovation: *When the power goes dark, the military wants to keep the lights on, **with a light carbon footprint.***

Fears of Mideast Oil Pricing and Unrest

Fluctuations in crude oil linked to events in Iran, Iraq, Kuwait, Qatar and Syria

CENTCOM AOR Traditional source of kinetic warfare activity involving the United States military “boots on the ground” going back several decades

Economic uncertainty drives a slow but steady drive towards home-grown renewable alternatives for consumer vehicles, (Toyota Hybrid, Tesla Model S, Tesla Roadster) - Big Oil obviously against this trend while investing in solar (BP)

Currently enjoying a worldwide surplus driving costs down in 2015 (until ~2017)

Campaign Promises, Promises, Promises...

The Republican Platform

“President finally gets serious about reforms” --

<http://www.rpc.senate.gov/policy-papers/republicans-welcome-the-president-to-the-table-on-cybersecurity>, (1/23/15)

Republican Senators Introduce Their Own Cybersecurity Bill -- (*PC World*,

http://www.pcworld.com/article/251105/republican_senators_introduce_their_own_cybersecurity_bill.html)

Strengthening and Enhancing Cybersecurity by Using Research, Education, Information, and Technology (SECURE IT) Act

The Democratic Platform

Outlines several key points in SOTU 1/20/15 regarding cybersecurity protections

The Cybersecurity Act (a bill introduced by two Democrats) would allow the secretary of the U.S. Department of Homeland Security to **designate** some private networks as critical infrastructure and **require** them to submit security plans to the agency. But the SECURE IT Act (sponsored by McCain R-AZ, Hutchinson R-TX, and Grassley R-IA) has **no such regulations**, instead focusing on **encouraging** private companies and the federal government to share more information about cyberthreats, sponsors said.

Paris 2015 Climate Change Talks

- 2015 United Nations Climate Change Conference, COP 21/CMP 11, (Le Bourget, France) 11/30 - 12/11/15, just a couple weeks after a **major terrorist attack** in Paris, France on 11/13. Record world leader attendance demonstrates significance of participation.



United nations conference
on climate change
COP21/CMP11

*165 Signatories, 196 Ratifiers
United Nations Framework
Convention on Climate Change
(UNFCCC)*

- Also in attendance: Russia's Putin and China's President Xi Jinping (strange bedfellows with the United States when threatened with climate change) re: cybersecurity, Russia/Ukraine and South China Sea's recent military actions.

Wars Over Limited Resources

Arctic Oil - potential conflict between US (Alaska), DK (Greenland), Russia, Canada

Potential oil reserves now accessible with the withdrawal of arctic ice shelves

Concerns regarding nuclear sites, use, and waste material disposal

Local concerns include Coldwater Creek and West Lake Landfill in North County

The point? To eliminate conflict, war and potential 21st century cybersecurity infrastructure power plant and grid line supply attacks by using renewable energy sources and processes which would yield minimal waste.

Busting Myths In Green Infrastructure Security

Too expensive? Cost of inaction to environment is far greater. Markets also gaining more traction as they realize potential for profits.

Won't make us safer? Political dependence on foreign oils fuel a strong need for domestic energy production

Can't produce a 24/7 reliable supply for the grid? The key is to have a mix of sources spread over a wide area: solar and wind power, biogas, biomass and geothermal sources. In the future, ocean energy can contribute too.





Conclusions

- Investing in clean and renewable energy sources increases our safety and cybersecurity by making affordable and available the infrastructure needed in the 21st century and beyond.
- It enhances and strengthens our national economy and infrastructure by reducing our external influences and dependencies on commodities made vulnerable by risk of conflict or by eventual depletion of resources.
- It is in our national interest to learn about renewables in order to take advantage of them and for our society to prosper from them, moving forward.

Questions and Follow Up

Thank you for your participation and attention.

