

Early Indications of Trump Administration Policy Directions on Nuclear Matters

- DOE preparing study of the country's electric grid to offer policy recommendations to ensure that reliable, baseload generation sources are preserved
- Lessening of subsidies & grid access rules that hurt nuclear and favor renewables.
- Recognition of Nuclear as strategically important base load power
- Acceleration of LNG facilities and natural gas exports – US domestic gas prices are then likely to rise
- No substantial change in DOE funding, but some redirection of funds to aid SMRs and advanced reactors
- Action to address nuclear waste storage, Including Yucca Mtn.

May 2017

Congress Pushing US NRC and DOE

Congress - Two Separate Approaches

First - Legislation directing US NRC to create a flexible and performance-based, technology-neutral, phased approach to licensing advanced nuclear reactors.

- **Requires DOE and NRC to develop expertise, facilities, computer codes, etc. to support advanced reactor technology;**
- **Requires NRC to develop a regulatory framework for licensing advanced nuclear reactors.**

Second – Legislation directing the US DOE to strengthen US supported R & D and other support for advanced nuclear reactor designs.

- **National Reactor Innovation Center allowing private-sector companies to work with national laboratories on advanced reactor concepts.**
- **Fast neutron source user facility in DOE**
- **Program of high-performance computational modeling and simulation of nuclear phenomena.**

No Big Funding Increases for Advanced Reactors, But:

- **DOE Office of Nuclear Energy received \$1.027 billion, a 5% increase over FY16.**
- **\$95M to support SMR/advanced reactor, engineering, permitting, and licensing preparation.**
- **Nuclear Energy Enabling Technologies Program got a boost of \$4.5M to be used to support advanced reactor programs, particularly nuclear startups.**
- **\$12M for Systems Analysis and Integration, along with a specific directive from Congress to “assess advanced nuclear energy deployment scenarios.” This program could flag the potential for advanced nuclear. DOE has for several years successfully used these tools to build excitement for renewables.**
- **\$10M funding for construction of the Advanced Test Reactor technical support building to house testing of fuels and materials for advanced reactors.**

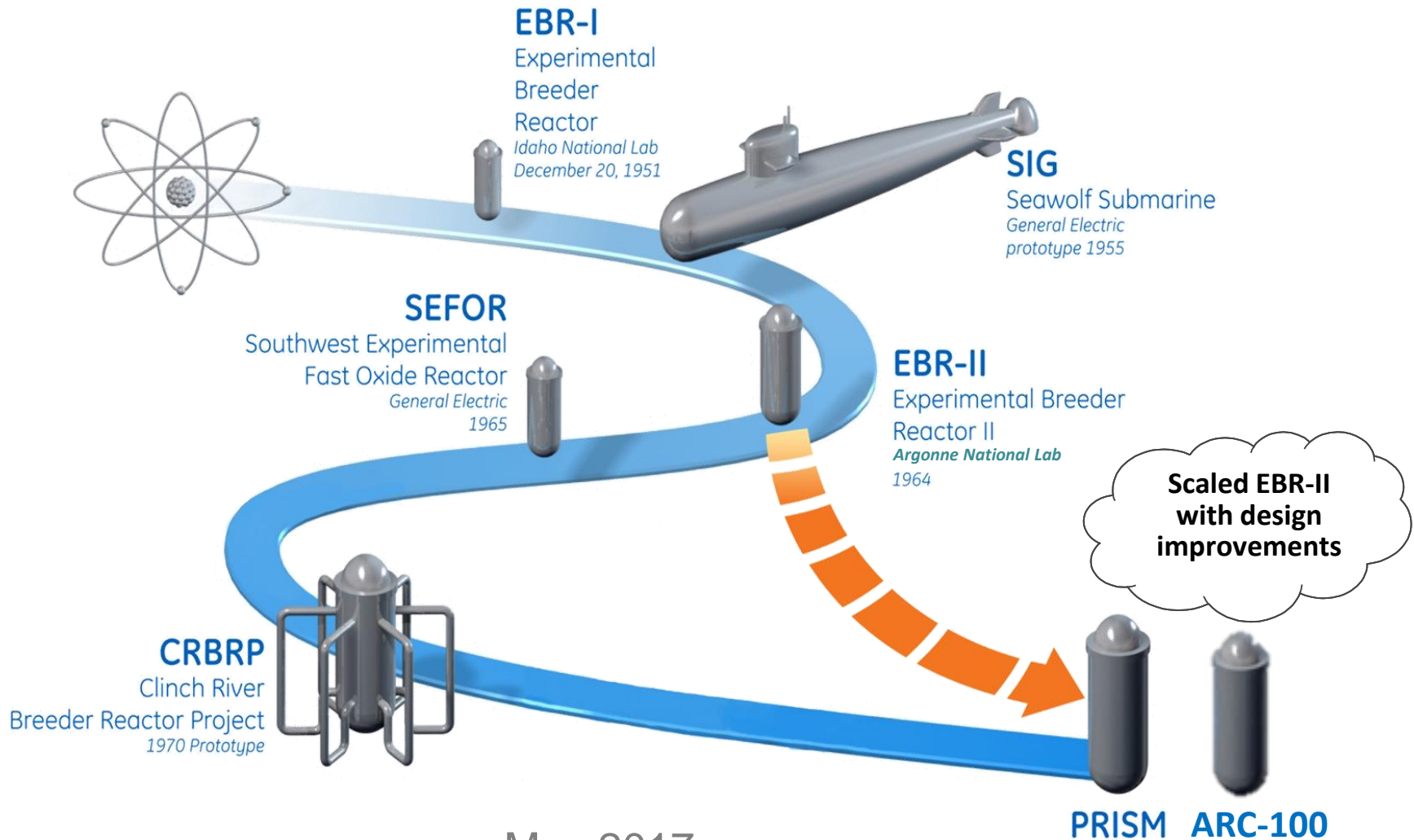


GEH and ARC: Collaborating to Commercialize a 100 MWe aSMR

International Workshop
Jeju Island, Republic of Korea – May 17, 2017

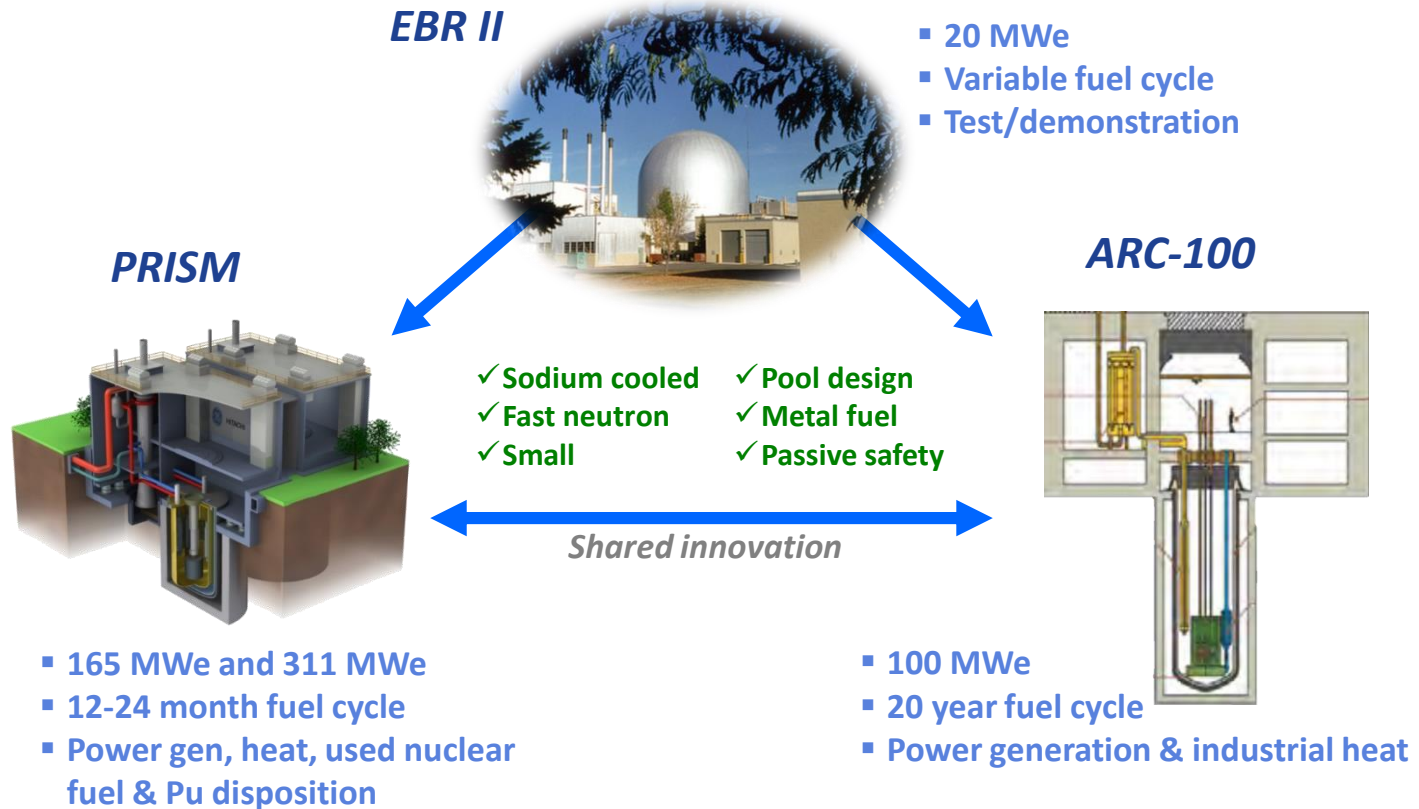


From EBR to ARC



May 2017

PRISM & ARC-100: The Commercialization of EBR-II



The ARC Management Team

200 Man-years Industry & Technology Experience

- Serial Business Entrepreneur focused on ARC – Wolf
- Founder/CEO of mPower SMR; Former President of WSI – Mowry
- Chief Nuclear Officer and COO of PSEG Nuclear utility - Braun
- Associate Director of Argonne National Lab – Sackett**
- General Counsel of U.S. DOE – Garrish
- Chairman of ITER fusion reactor Council – Iotti
- Leader of Los Alamos non-proliferation – Arthur
- Managing Director Baker Donelson law firm (DC) – Campbell
- Designer of EBR-II mechanical systems – King**
- President of Sandia National Lab – Robinson
- Developer of IFR and ARC-100 reactor cores – Wade
- Globally recognized innovator of metallic fuel – Walters**
- Former High Tech Executive & CEO – Ali

**** Key leaders of U.S. DOE sodium fast reactor program (EBR-II)**

Non-Executive Directors



Scott L. Campbell
Director & Co-Founder



C. Paul Robinson, PhD
Vice Chairman



Irfan Ali

Members
of the
Board of
Directors**

Donald M. Wolf*
Chairman, CEO,
&
Co-Founder



Robert C. Braun*
SVP & COO



Christofer M. Mowry*
Executive Director



Theodore J. Garrish*
General Counsel & VP
Government
Relations



John Sackett, PhD
SVP & CTO



**Robert Iotti,
PhD***
SVP – Program
Management



James Saldarini
VP – Licensing &
Regulatory
Affairs



Edward Arthur, PhD
VP – Fuel Cycle
Management &
Safeguards



Ronald King
VP – Mechanical
Design
& Reactor Operations

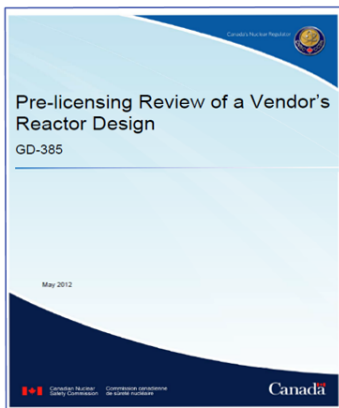
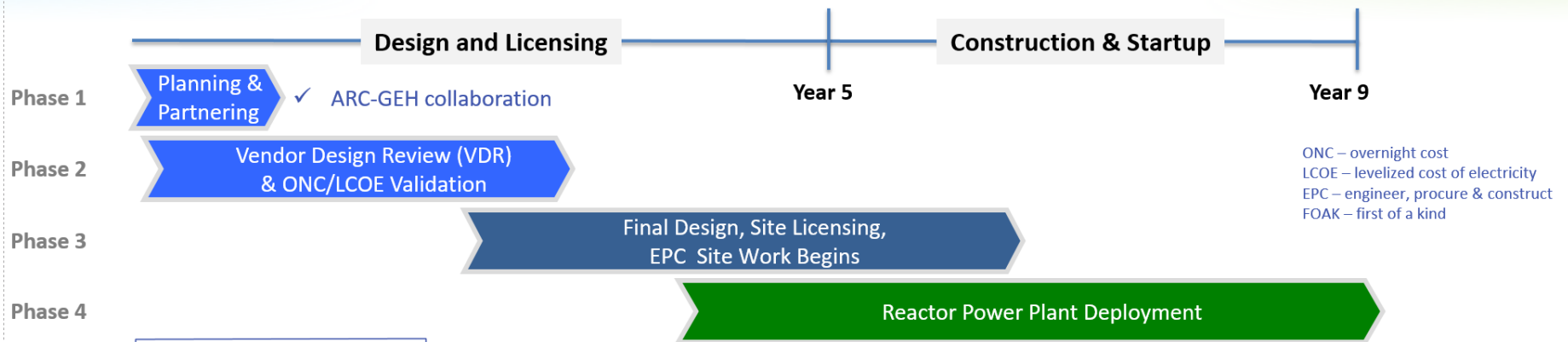


David Wade, PhD
VP- Reactor Design
& Safety Analysis



**Leon Walters,
PhD**
VP- Fuel Design

Canadian Commercialization Plan



aSMR Guiding Principles:

- 1. FOAK plant built in Canada is 'commercial reference' plant.** ... prospective customers assured that their plant would require few design changes .
- 2. 'Stay in the box'** ... design bound by existing analysis and performance data, requiring no expensive and time consuming R&D.
- 3. Design relies on proven commercial nuclear technology.**

May 2017

ARC – GEH and ROK Nuclear Industry: Is a Collaboration Possible?

GEH

- Experience & expertise of 60 years of deploying nuclear projects
- 60 years of sodium reactor experience
- Extensive programs, processes and infrastructure
- Worldwide marketing and government relationship network

$$2 + 1 = 5$$



ARC

- 120 Man-Years senior level EBR-II experience
- Active in Canada Licensing Regime
- Start-up mentality
- Patents Protecting 100MWe SMR

$$5 + \text{ROK} = ???$$

ROK

- Strong interest in Sodium Fast Reactor Technology
- Working with Argonne National Lab - as is ARC
- Proven capability to build and deliver modern nuclear plants

Collaboration

Thank You

April 2017