

Nuclear Plant Digitalization: Market Overview

NUCLEAR ENERGY
INSIDER

Credits: AREVA NP, 2017 • Forbes, 2017 • Schneider-Electric, 2017 • TechRepublic, 2017 • IAEA, 2003/2015 • EPRI, 2016

In some places **NPP operating costs have risen by 30%** in the last few years.



The industry **invests about \$7.5 billion per year** in maintenance and upgrades of the plants

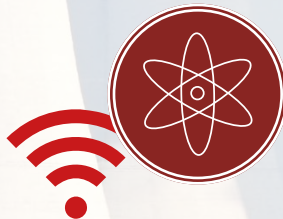
CYBER SECURITY

In 2016, hacking cost the world **over \$450 billion** across all industries



Companies who file for an application to operate a nuclear reactor **have to submit a cybersecurity plan to NRC**

Nuclear plant safety systems are **isolated from the internet** – industry cyber security programs have been in place **since 2008**



PREDICTIVE ANALYTICS



When EDF implemented predictive maintenance across their nuclear and fossil fuel generation fleet, **a single catch saved the company over \$1 million**



TATA POWER

At American Electric Power, the company **saved more than \$20 million through Industrial IoT**, and Tata Power in India had a gas turbine early warning catch that **saved nearly \$300,000**

RECORDS & CONFIGURATION MANAGEMENT

The IAEA Incident Reporting System (IRS) shows that on average **25% of recorded events** could be **caused by configuration errors or deficiencies**



CM **maintains consistency** between the design and licensing basis requirements, the physical configuration and the configuration information.

INSTRUMENTATION & CONTROLS

Operating plants are transitioning I&C equipment from analog to digital. Drivers include:



Ageing & obsolete equipment



Negative experiences with digital I&C replacements



New plants will be 'all digital'



2nd Annual

Nuclear Plant Digitization Conference 2017

13-14 November

The Hilton City Center, Charlotte NC

Digital innovation to deliver competitiveness priced nuclear power

North America's number one nuclear plant digitalization conference with over 250 key decision makers and industry leaders

Top speakers:



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