Fortum, Energy utility wave power piloting experience

Dr Heli Antila, Chief Technology Officer
Wave power is in demonstration phase in Sweden

- Full-scale demonstration project launched in west coast of Sweden, Sotenäs
- Technology by Seabased
- Installation of first phase of WECs (~1 MW) has been finished.
- First power units generated to grid early 2016
- First submerged substation in operation since November 2015
- Now main focus to obtain experience from buoy mechanical strength
AW-Energy Oy – the most advantaged near-shore technology

- WaveRoller is among the most reliable technologies in the market generating constant power over throughout testing seasons
- Systematic development approach where PTO test center in Järvenpää (Finland) plays a crucial role
- High expectations for the next generation 350kW WaveRoller to be deployed to Portugal during 2017
- In July, 2016 the EIB signed the first ever financing deal under the InnovFin Energy Demonstration Project programme to invest up to €10 million in AW Energy to support the development of commercial WaveRoller® wave energy technology
- Fortum is shareholder in AW-Energy
Wello Penguin technology to be deployed in the UK

- Penguin - 1MW floating device with off-the-shelf components
- Several years testing in Scotland
- Wello’s technology is demonstrated in the Horizon 2020 project – CEFOW.EU
- Fortum is a shareholder in Wello
Common targets in all wave power demonstrations

**WEC Technology**
- Achieve lower levelized cost of electricity (LCOE)
- Improve reliability
- Permanent deployment
- Generate high quality power

**O&M**
- Design and practice efficient and safe O&M procedures
- Understand and optimise real O&M costs

**Environment**
- Scientific evidence how one device or array impact on environment
Transition towards Solar Economy is ongoing and speed in increasing
Thank you