



#InvestEUresearch

# Research and Innovation Activities on Smart Grids and Energy Storage Financed by the EC

**Aleksandra Kronberga**

DG ENER  
New Energy Technologies  
and Clean Coal

ETIP SNET Regional  
Workshop – Riga – Latvia –  
7/12/2017

Research and  
Innovation

# H2020 Challenge

## Secure, clean and efficient energy system

### Energy Efficiency



Heating & Cooling



Consumers



Buildings



Industry & Products

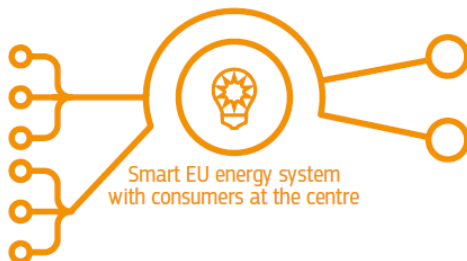


Finance for Sustainable Energy

### Global Leadership in renewables



### Smart and Clean Energy for Consumers



### Smart Cities and Communities



### Smart Citizen Centered Energy system



Carbon capture storage/use

### Near-zero CO2 emission from fossil fuel / carbon intensive industries



Overall Indicative budget for 2018 ~ 540 MEur

# Where to find information about 2018-2020 calls

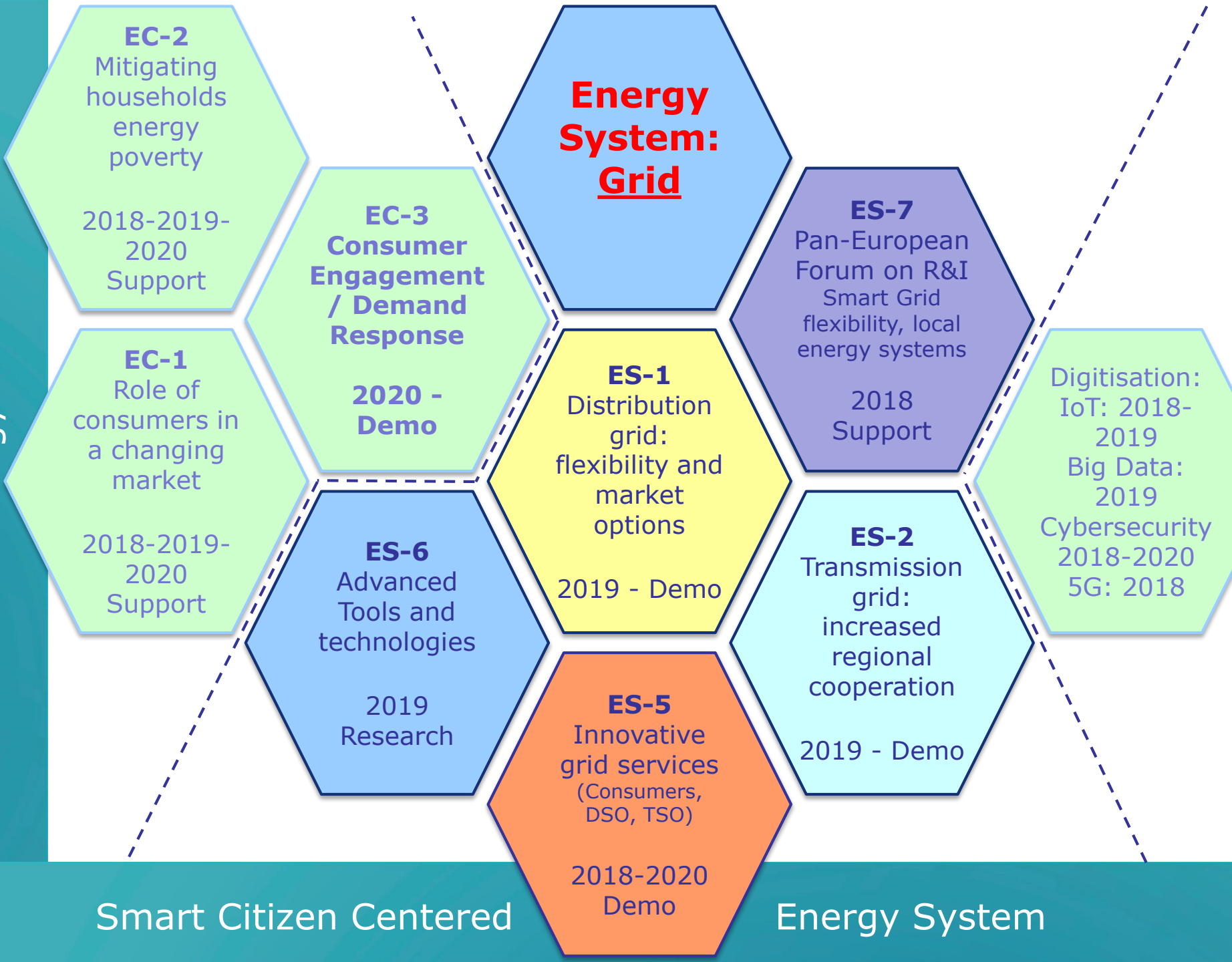
**Secure, clean and efficient energy system WP-2018-2020 text**  
[http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-energy\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-energy_en.pdf)

## Videos and PPPs from H2020 info-days

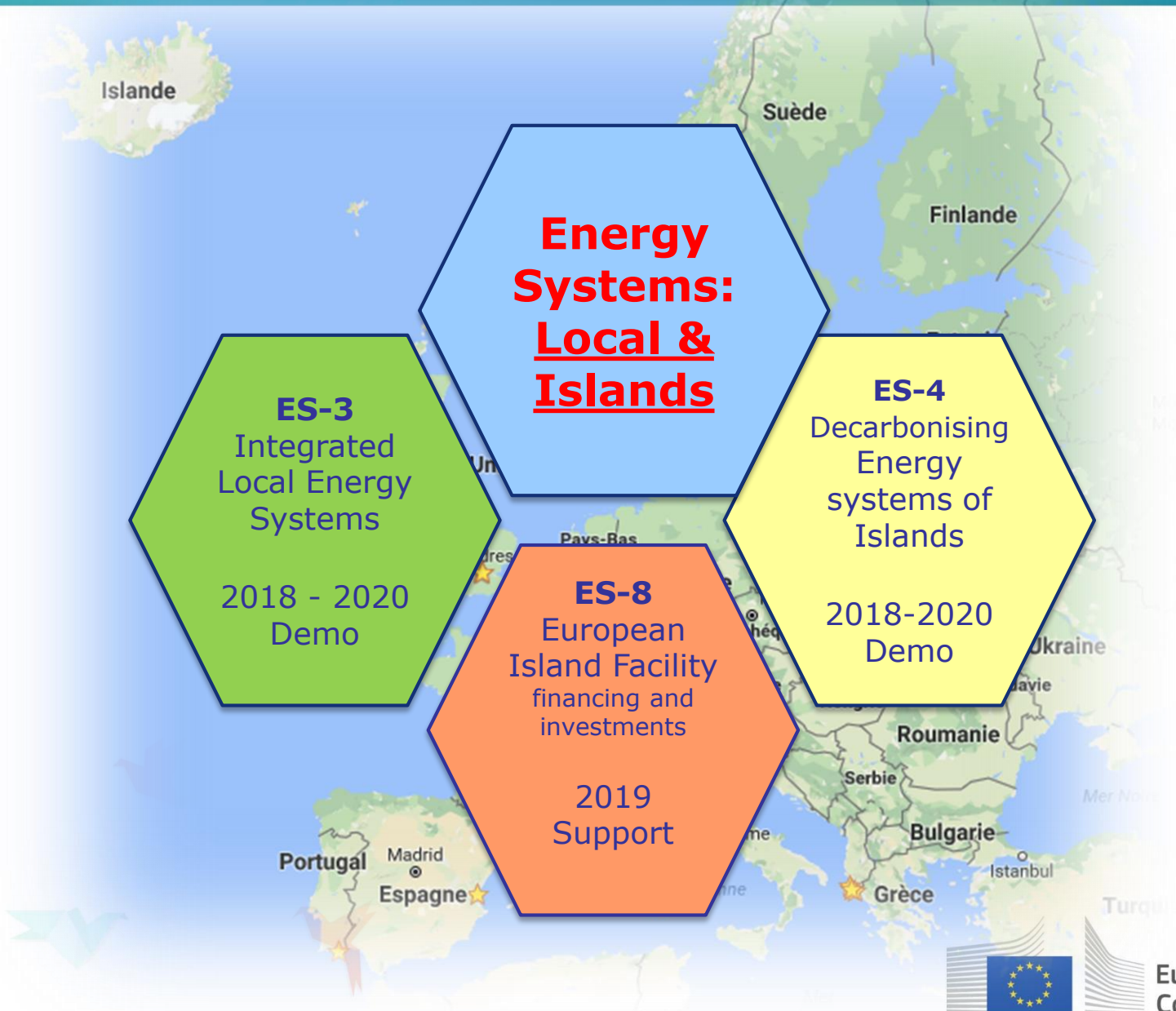
**All Energy-related topics** <https://ec.europa.eu/easme/en/horizon-2020-secure-clean-and-efficient-energy-info-day>

- First you'll find all videos in chronological order (with Q&A sessions, etc)
- Then – all PPPs in chronological order
- **Energy Systems - related videos** <https://webcast.ec.europa.eu/horizon-2020-energy-info-days-smart-citizen-centred-energy-systems>
- **Energy Systems - related PPPs** [https://ec.europa.eu/easme/sites/easme-site/files/02\\_info-days-remy-mod20mvs.pdf](https://ec.europa.eu/easme/sites/easme-site/files/02_info-days-remy-mod20mvs.pdf)

Smart and Clean Energy for Consumers



# Smart Citizen-Centred Energy System: Local and Islands



# H2020 Financing in 2018-2020 (continued)

In addition to the above, **Secure, clean and efficient energy system WP 2018-2020** also foresees a possibility of financing joint actions by MS: e.g. LC-SC3-JA-1-2018: Joint programming actions to foster innovative energy solutions – ERANET COFUND

## OTHER H2020 WORK PROGRAMMES:

### ICT WP 2018-2020

[http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-leit-ict\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-leit-ict_en.pdf)

E.g. DT-ICT-10-2018-19: Interoperable and smart homes and grids  
DT-ICT-11-2019: Big data solutions for energy

### Secure societies WP 2018-2020

[http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-security\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-security_en.pdf)

SU-DS04-2018-2020: Cybersecurity in the Electrical Power and Energy System: an armor against cyber and privacy attacks

# Overview of Topics under Clean Energy Heading

Instrument	TRL	Ec. fund per Proj. MEur	2018 MEur	2019 MEur	2020
------------	-----	----------------------------	--------------	--------------	------

EC-3	Consumer Engagment					Open
------	--------------------	--	--	--	--	------








ES-1	Distribution grid: flexibility and market	IA	5-8	6-8		37.3	
ES-2	Transmission grid: regional cooperation	IA	5-8	8-10		25	
ES-5	Innovative Grid services	IA	5-8	13-17	30		Open
ES-6	Advanced tool and technologies	RIA	NA	2-4		25.4	

ES-3	Integrated local energy systems	IA	5-8	5-6	21		Open
ES-4	Decarbonising energy systems of islands	IA	5-8	7-10	19		Open
ES-8	European island facility	CSA	NA	10		10	

ES-7	Pan European	CSA	NA	3-4	3		
------	--------------	-----	----	-----	---	--	--

73	97.7
----	------

Most EU smart grids & storage projects are required to join the "BRIDGE" family!  
 2017 figures: **36** projects in total | EC funding **413** M€

Distribution Grids	Distributed Storage	Transmission grids	Large-scale storage	RES and H&C
<p><b>2014:</b> 10 projects, 60 M€</p> 	<p><b>2014:</b> 7 projects, 72 M€</p> 	<p><b>2015:</b> 4 projects, 82 M€</p> 	<p><b>2015:</b> 2 projects, 25 M€</p> 	<p><b>2016:</b> 2 projects, 8 M€</p> 
<p><b>2016:</b> 7 projects, 90 M€</p> 	<p><b>2017:</b> 4 projects, 76 M€</p> 			



# Why BRIDGE? Projects work on common challenges:

Data  
management

Business Models

Regulations

Customer  
engagement

## BRIDGE

- Is a European Commission initiative
- Gather Horizon 2020 Smart Grid and Energy Storage demonstration projects
- Creates a structured view of obstacles to innovation.
- Fosters continuous knowledge sharing amongst projects
- Deliver-conclusions and recommendations with a single voice



## Closer collaboration between Nordic countries?

- At least **in the context of H2020 calls** old MS and Norway are encouraged to **take on board as much as possible new MS** (if new MS do not take leadership themselves!)
- It's not just about getting H2020 funding, it's also about increasing national funding for clean energy research in new MS: whereas, in general, earmarked financing for energy research tends to be low in new MS, their governments are still good at finding national top-up for the winning projects
- Old MS and Norway could share their experience of **joining Mission Innovation** (all Nordic States are in) and push new MS to join too. We need to have all MS in! The requirements for joining are not as demanding as they look at first sight. With low "earmarked" financing for clean energy research in new MS, doubling commitment hardly requires any effort.
- All Nordic countries could be more active in **SET-Plan**

# SET-Plan: Implementation Plan on Energy Systems – expected on 24.01.2018 – still possible to join in!



The Plan covers  
(Joint) R&I actions by

- EU Member States
- Stakeholders

With financing/action by EU where it can bring value added

By now - largely agreed within temporary WG, with input of



European Technology & Innovation Platform "Smart Networks for Energy Transition"; role = to guide Research, Development & Innovation



**ERA-NETs (co-ordination between energy research funders)**

[European Energy Research Alliance - Joint R&I programming by key research institutions with or without EU support]



**Horizon 2020 "classical" calls for proposals**

# How demanding is participation in SET-Plan (joint) actions?

- For the time being Nordic countries with exception of Norway and (partially) Sweden shy away from joint actions within SET-Plan.
- At the same time, there is complete freedom to identify co-operations which suits concrete MS on a concrete topic.
- Even if it is just certain result sharing/ info exchange between nationally financed projects – it is still very beneficial! See e.g. below

	Share results	National project	Transnational - Europe (ERA-NET)	International (e.g. Mission Innovation)	H2020 complement
Demand response engineering	UK, DE, CY, TR, NL	DE, TR, NL	DE, CY, NO, NL		CY, TR

**THANK YOU!**

**Contact: [Aleksandra.Kronberga@ec.europa.eu](mailto:Aleksandra.Kronberga@ec.europa.eu)**

Ph. 0032 2 29 67816

Main current responsibilities:

- DG ENER policy officer for battery-based energy storage and contact point on clean mobility (SET-Plan 7, Batstorm, etc)
- EC officer for Regulation WG of BRIDGE and ERA Net SG+ Reg Sys
- Energy R&I country desk for Latvia, Finland and back up for Denmark

**New Technologies Unit - DG ENER [ener-C2-@secretariat@ec.europa.eu](mailto:ener-C2-@secretariat@ec.europa.eu)**

**Ph. 0032 2 29 87843**

**Some other EC structures dealing with smart grids**

Wholesale & Retail energy markets' units: market design (ENER-B2&3)

Interoperability&standardisation – ENER B3 and CNECT

Cybersecurity and Digital Privacy Unit (DG CNECT H1)

Smart Mobility and Living unit (DG CNECT H2)

