



# Access to Smart Electricity Systems for Final Customers

*5th Conference on Regulation of Infrastructures  
The Challenges of Digitalisation and the Use of Data  
24 June 2016, Florence*

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# Introduction

## > EU Electricity Goals

- Secure, affordable, sustainable
- Trilemma?

## > Smart Electricity Systems

- Enabling *interaction* of system users
- Communication systems

## > Access to Electricity and Com. Systems

- Two different access regimes
- What are the *conditions* for final customers to access SES communication services and what are their *guarantees* for accessing SES communication services?



# Smart Electricity Systems

## > Policy Objectives

- *What*: Grid resilience, energy efficiency, RES, affordability
- *How*: Involving System Users
  - Interaction, 'active role', demand-response

## > Technical Layout

- Electricity + communication infrastructure
- Com. systems various technical options



# Two Network Industries – Two Access Regimes

## > Access to Electricity Systems

- Establishing internal competitive market
- Freedom of choice for customers to choose supplier, vice versa
- “transport of electricity with a view to its delivery” (*Citiworks*)
- Public service obligation (PSO)
  - “*the right to be supplied with electricity of specified quality [...] reasonable, easily and clearly comparable, transparent and non-discriminatory prices*” (art. 3(3) Electricity Directive)



*[continued]*

- › Access to Telecommunication Services
  - 1) Electronic communication services
  - 2) Universal services
  - 3) Services of General Interest
  
- › Ambiguity for Access to SES
  - SES: functioning electricity system depends on access to communication services of specified quality
  - Different communication services, different conditions and guarantees for final customers



# Consequences for Access to SES – *Four Scenarios*

- › Scenario 1: Data Connection under USO
  - Universal Service Directive:
    - functional internet access, availability for all users, geographically independent, affordable price
    - Does not guarantee sufficient internet access for SES
  
- › S2: Smart Meter Communication Infrastructure
  - Smart meter roll-out
    - *If* economically viable at least 80% of final customers
    - Need for min. reading interval
    - Availability of smart meter and infrastructure is not guaranteed



## > S3: Other Communication Systems

- Service of General Interest
  - Member States ensure final customers services for SES communication
  - Guarantee for SES communication services of specified quality on national level

## > S4: Alternatives ?

- What if none of the above scenarios ensures SES communication services?
  - DSO?
  - BUT: Ensuring PSO is not obligation of DSO but for MS
  - Designated entity for providing SES communication services?



# Conclusions

- > SES is crucial for developing secure, affordable, and sustainable electricity system
- > SES require communication services
- > Relation between access to electricity systems inc. guarantee to universal services and access to com. services is central in SES
- > Therefore: access to SES communication services of specified quality in SES needs to be ensured



# Recommendations

## > Ensuring either:

- Universal service of data connection with functional internet access meeting SES requirements
- Smart meters and communication service for all customers
- Service of General Interest for SES communication requirements
- Designated entity for ensuring SES communication services



# Thank you!

## Questions and Discussion...

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