



# Welcome

## Session will start shortly

Seminario de Grado

**Normatividad de las EERR en Colombia y sus desafíos**

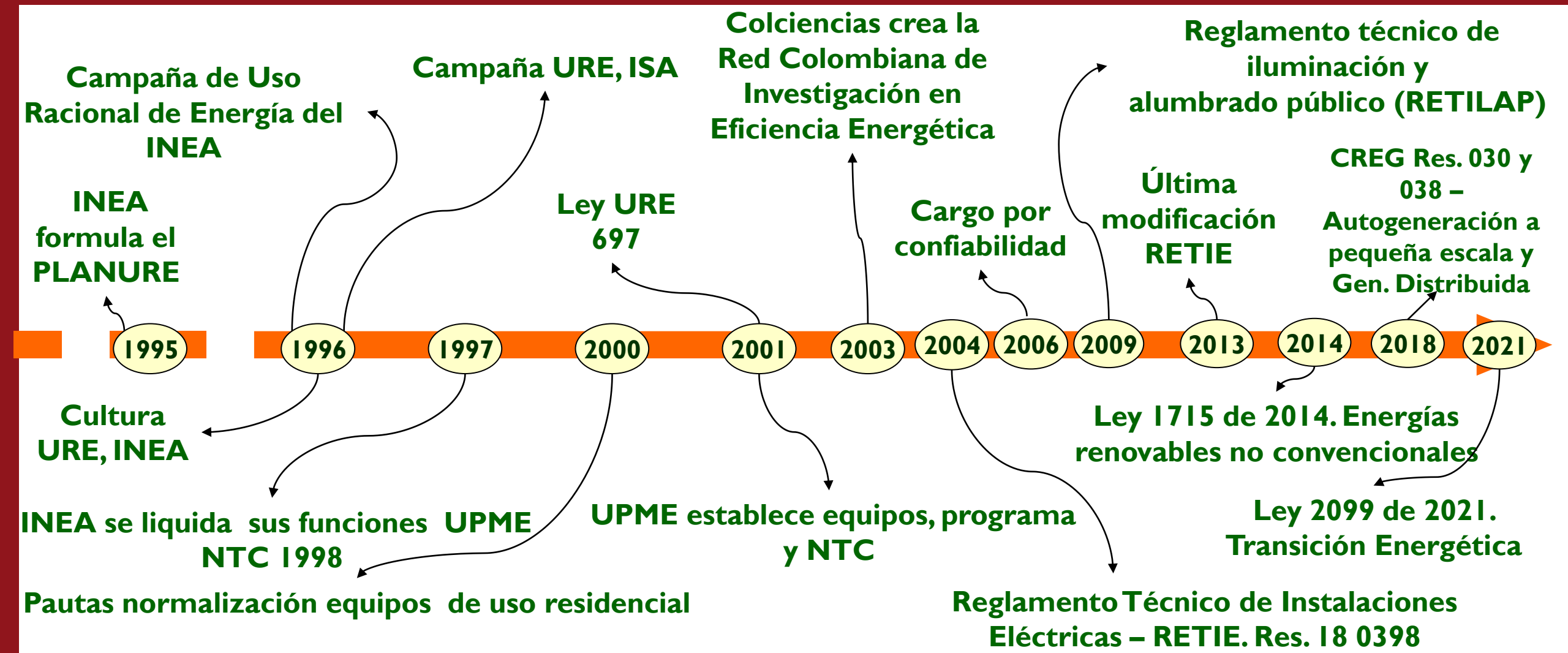
Instructor: Dr. Fernand Diaz Franco



## 2. Normatividad para el Impulso de las EERR en Colombia



# Regulations in the Electrical Sector





## Energy policies:

1. Low or zero-carbon to reduce the production of greenhouse gases and mitigate climate change
2. Secure and not dependent on imported fossil fuel
3. Economic and affordable by industry, commerce and all sections of society



# SmartGrid



A SmartGrid is an electricity network that can intelligently integrate the actions of all users connected to it – generators, consumers and those that do both – in order to efficiently deliver sustainable, economic and secure electricity supplies. SmartGrids:

- Facilitate the connection and operation of generators of all sizes and technologies
- Allow electricity consumers to play a part in optimizing the operation of the system
- Provide consumers with greater information and choice of supply
- Reduce the environmental impact of the total electricity supply system
- Deliver enhanced levels of reliability and security of supply

## CREG – 175 (Dic 2020)

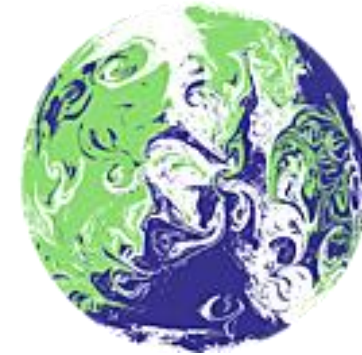
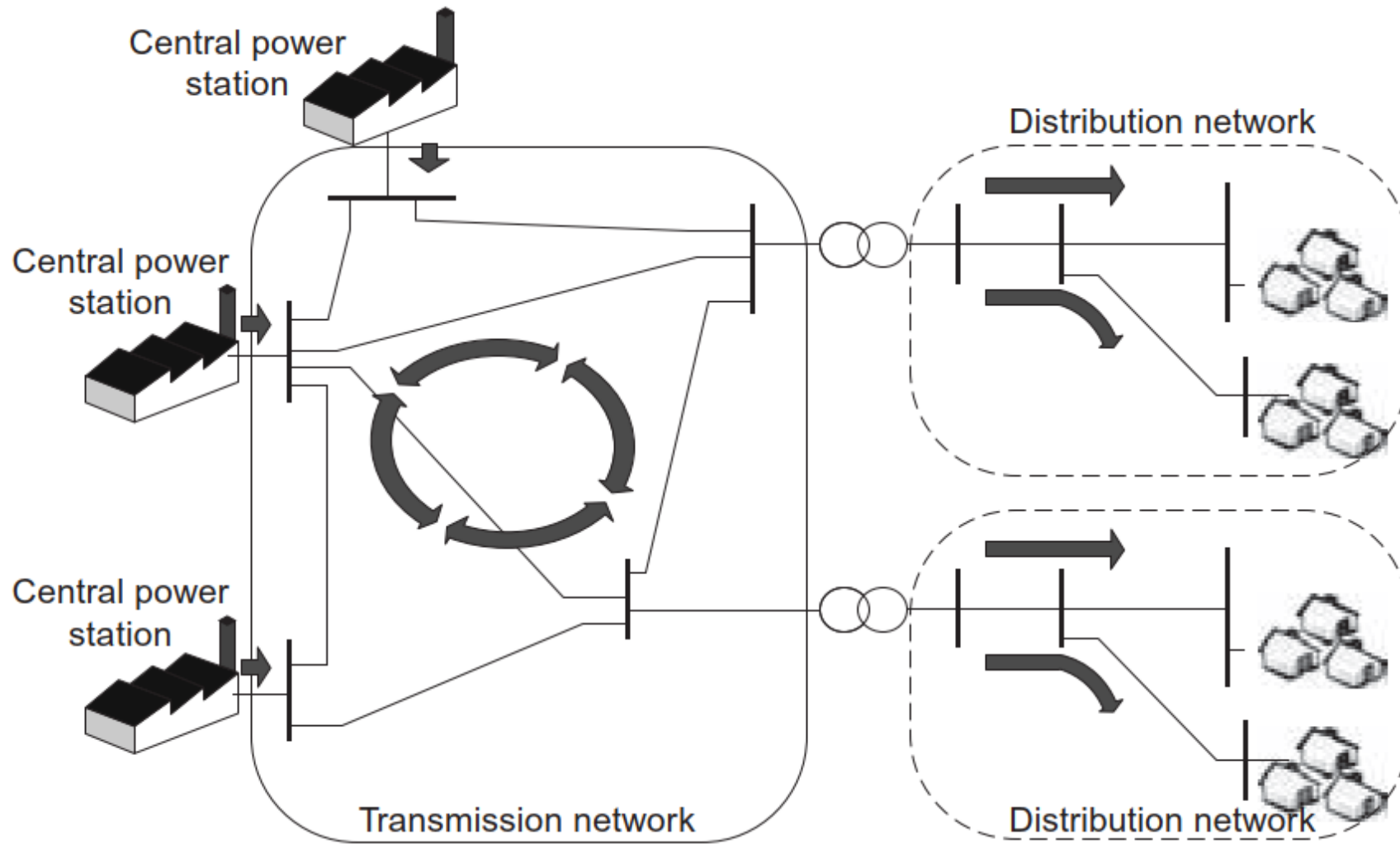
Condiciones para la implementación de la infraestructura de medición avanzada en el SIN

Estudios previos: IMA CREG-077 (2018)





# Why DG?



**UN CLIMATE  
CHANGE  
CONFERENCE  
UK 2021**



# Future Development of DG

Primarily:

- Electrical Energy Production
- Limited contribution to ancillary services

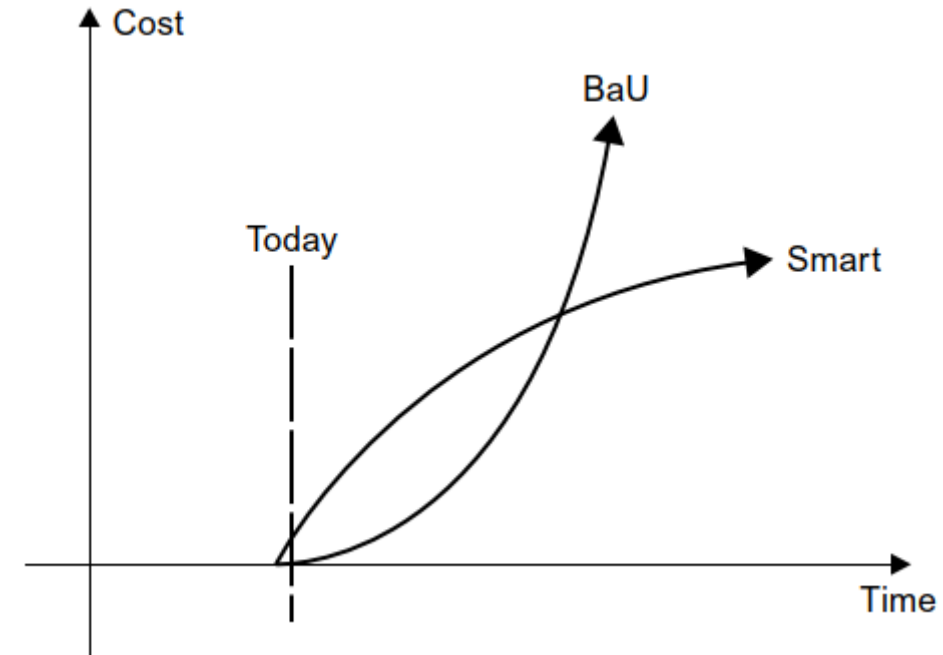
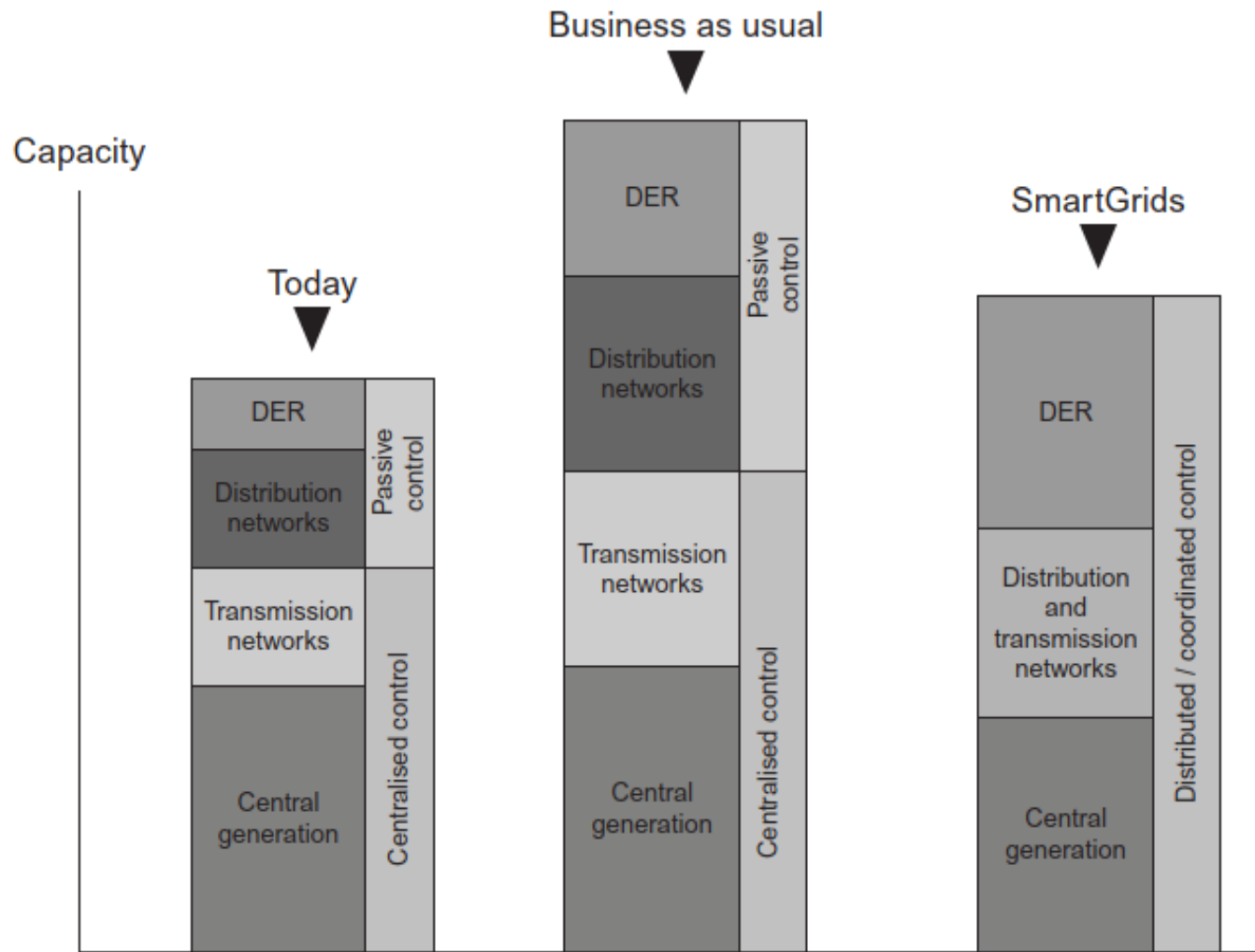
Grid Codes

The current policies of connecting distributed generation are generally based on a 'fit-and-forget' approach

This approach is beginning to restrict the deployment of distributed generation and increase the costs of investment and operation

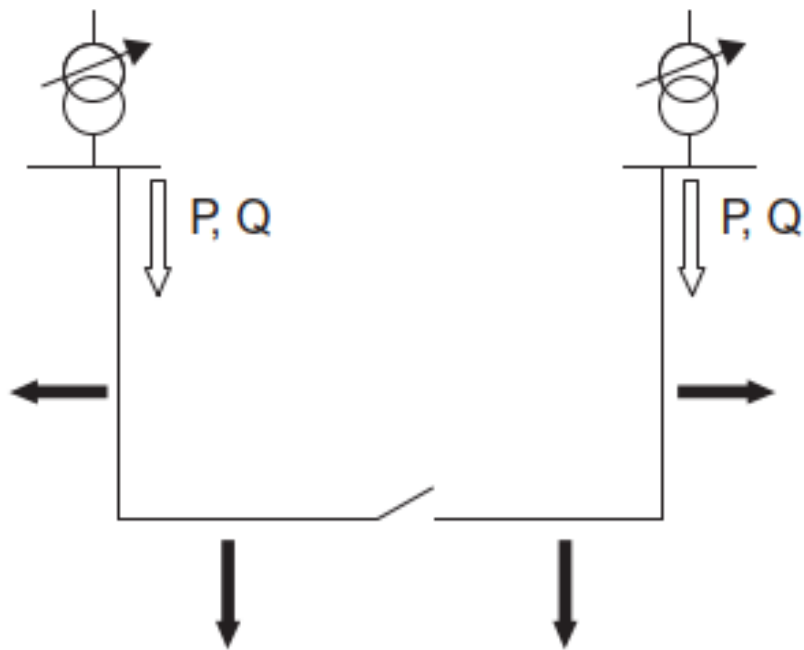


# Future Development of DG

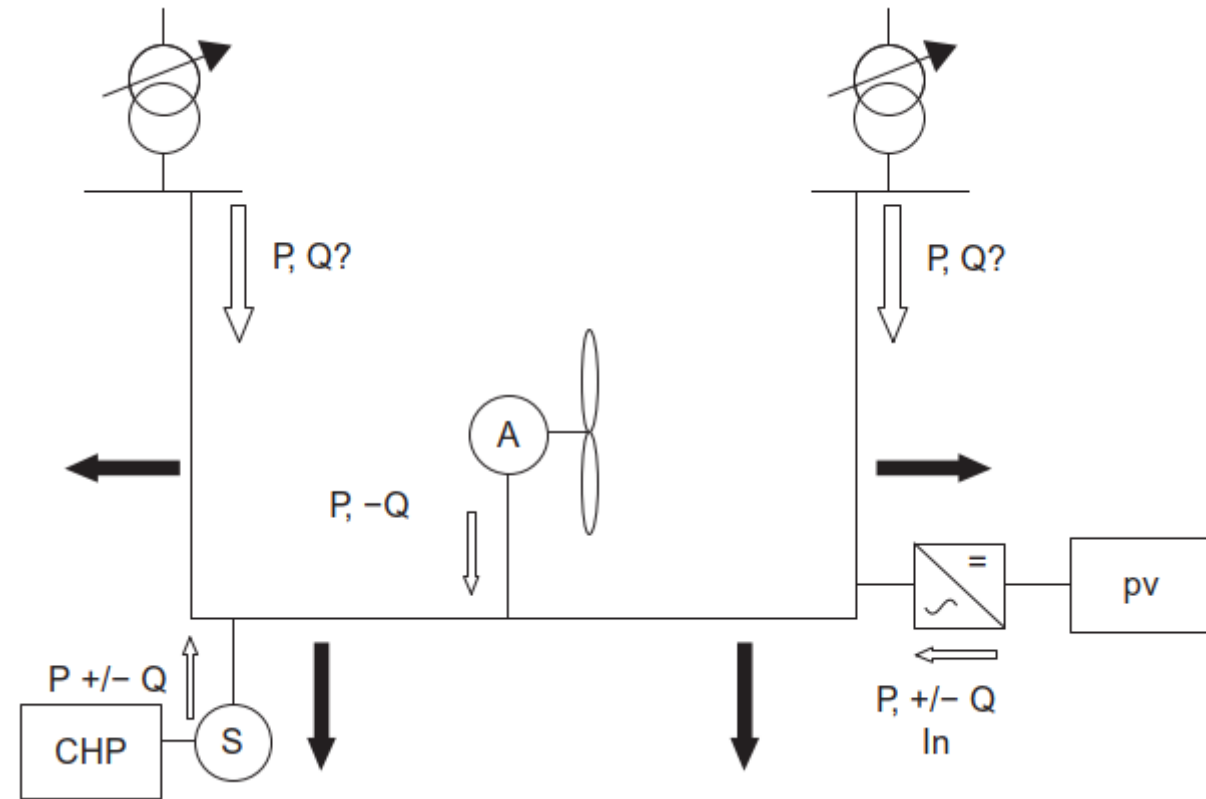


# DG and the Distribution System (DS)

## Conventional DS



## DS with DG





# Activity 4



- Ley 1715 de 2014 y Ley 2099 de 2021
- Res. UPME 319 de 2022
- Res CREG 24 DE 2015
- Res CREG 174 de 2021
- Sistema de Información georeferenciado (OR)
- Res. CREG 135 de 2021
- Res CREG 101 001 de 2022
- Acuerdo CNO 1522 de 2022 (Anexos 1 y 2)
- Acuerdo CNO 1549 de 2022 (Anexos)
- Res CREG 148 de 2021
  - Res CREG 101 008 DE 2023
  - Res UPME 464 de 2021



# Tiempo Actividad 4