

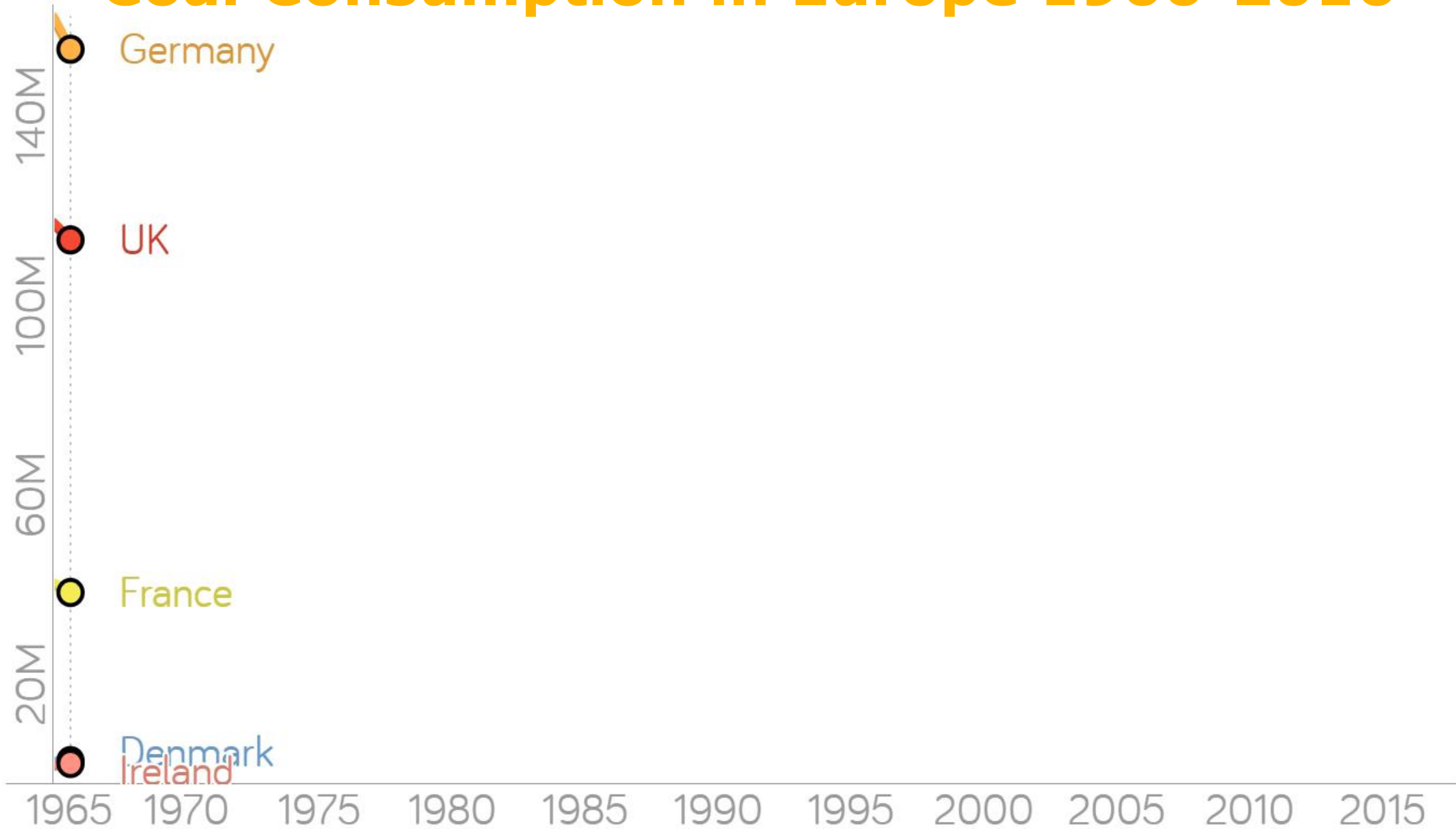
# The Impact of a Carbon Price Floor on European Electricity Markets

Paul Deane, Celine McInerney, Ellen O'Connor and Bernadette Power

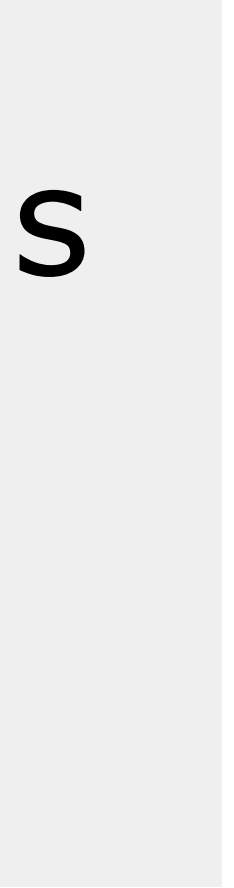


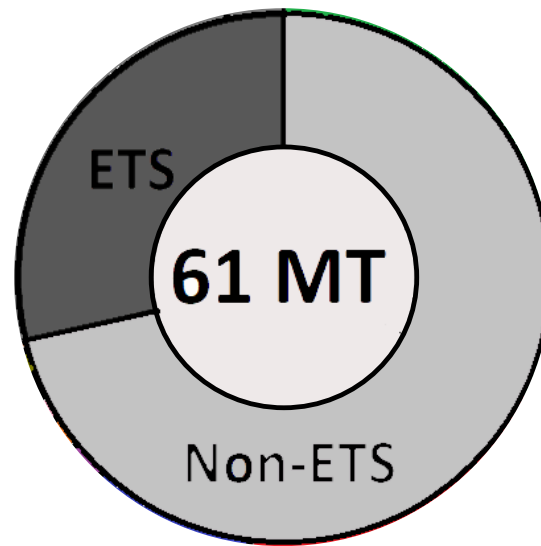
# A short history of Coal In Europe

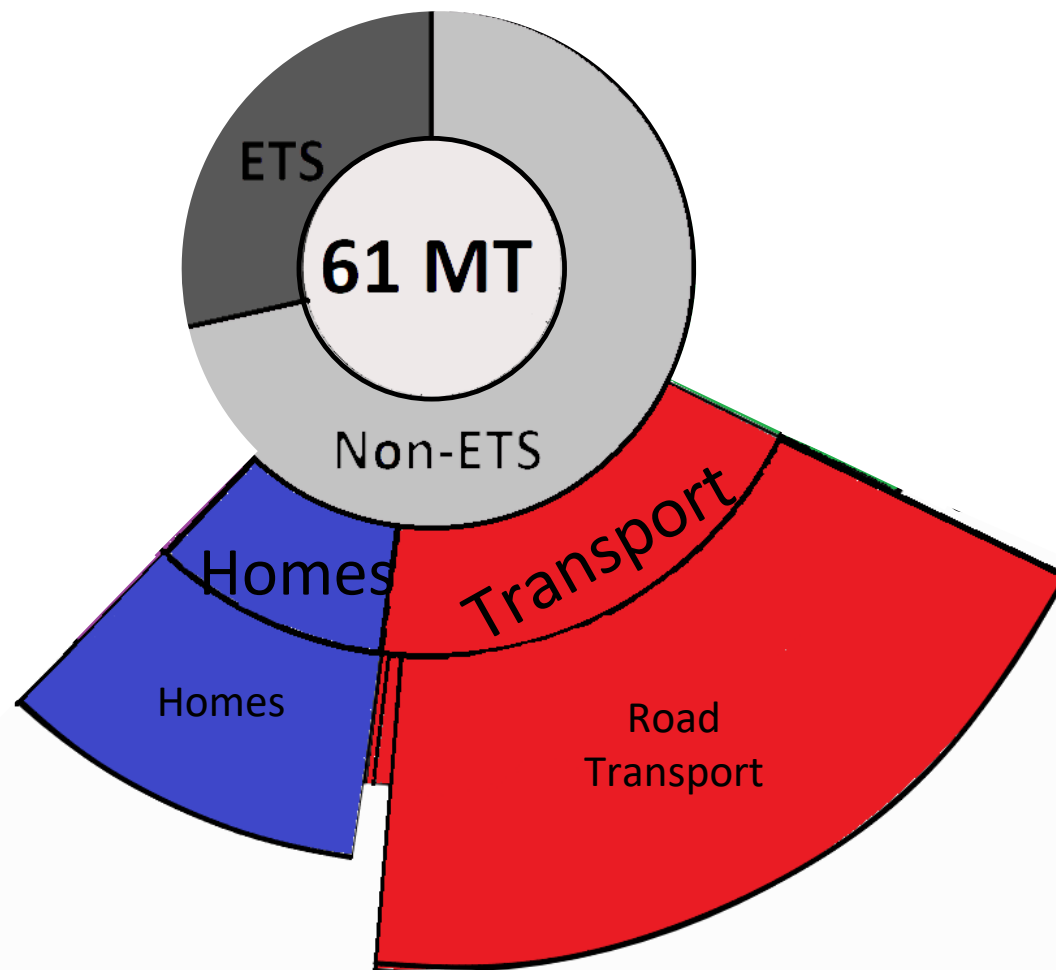
# Coal Consumption in Europe 1966-2016

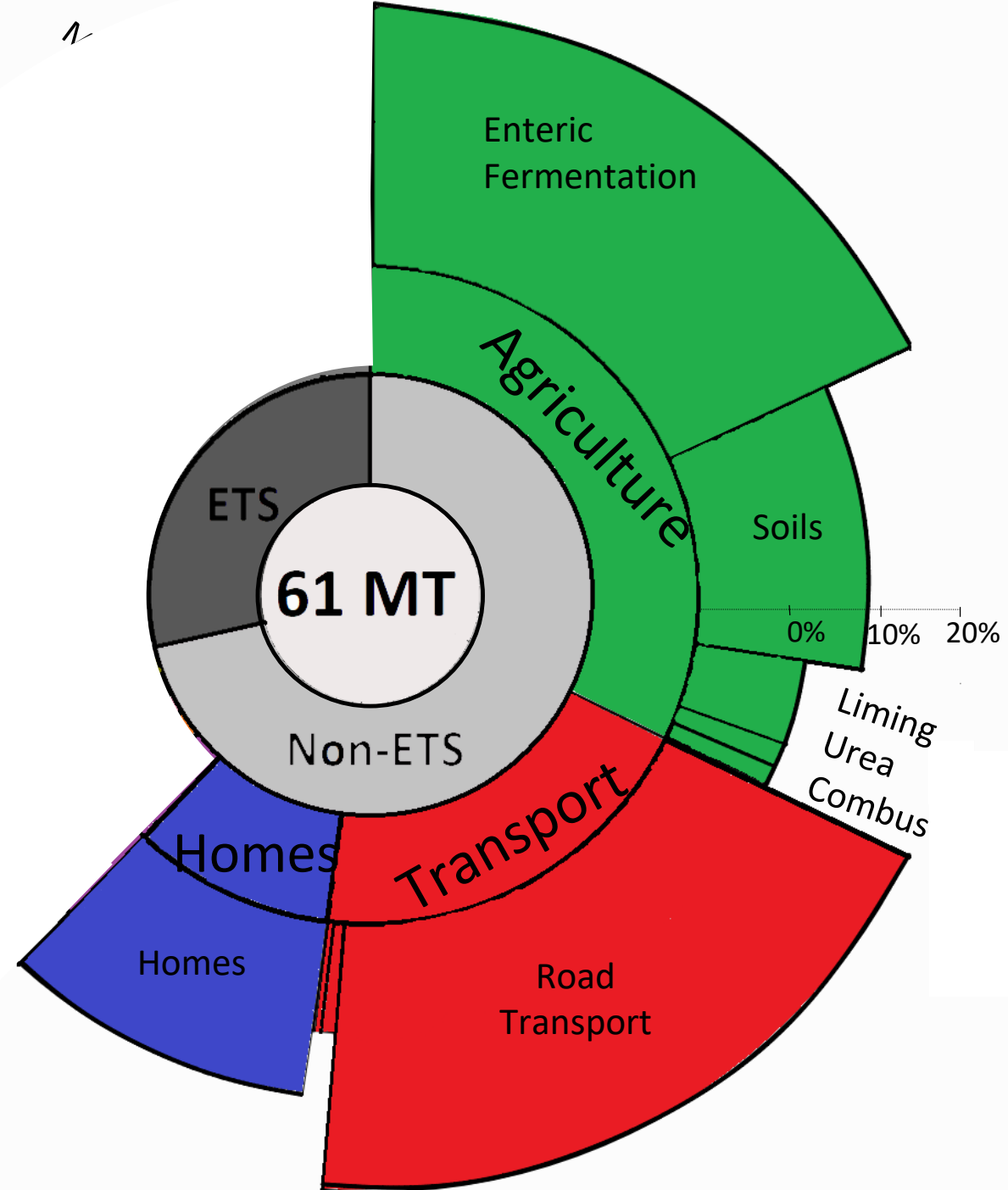


# Ireland: Policy and Emissions Context









The question we ask:

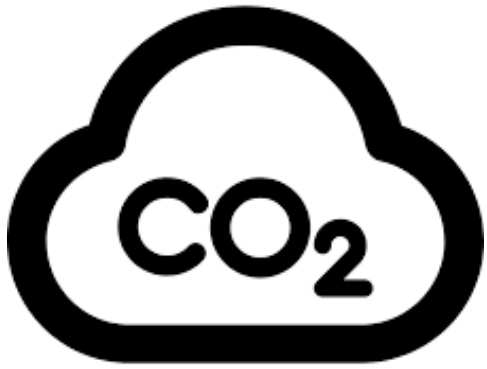
What is the EU wide impact of a Carbon  
Price Floor (CPF) in Select EU Member  
States?

And

How does this compare to a coal phase out?



The results we present are relative to a scenario where there is no CPF



**Emissions**



**Government  
Revenue**

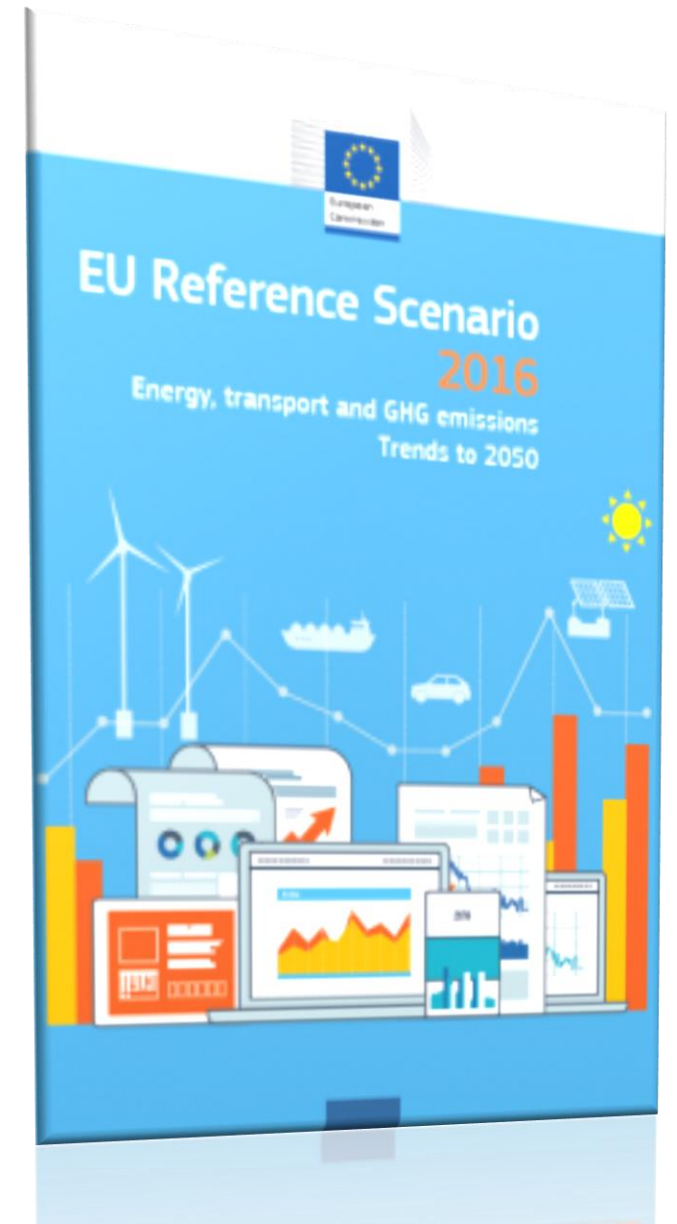
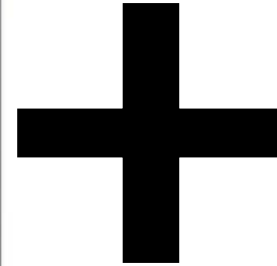
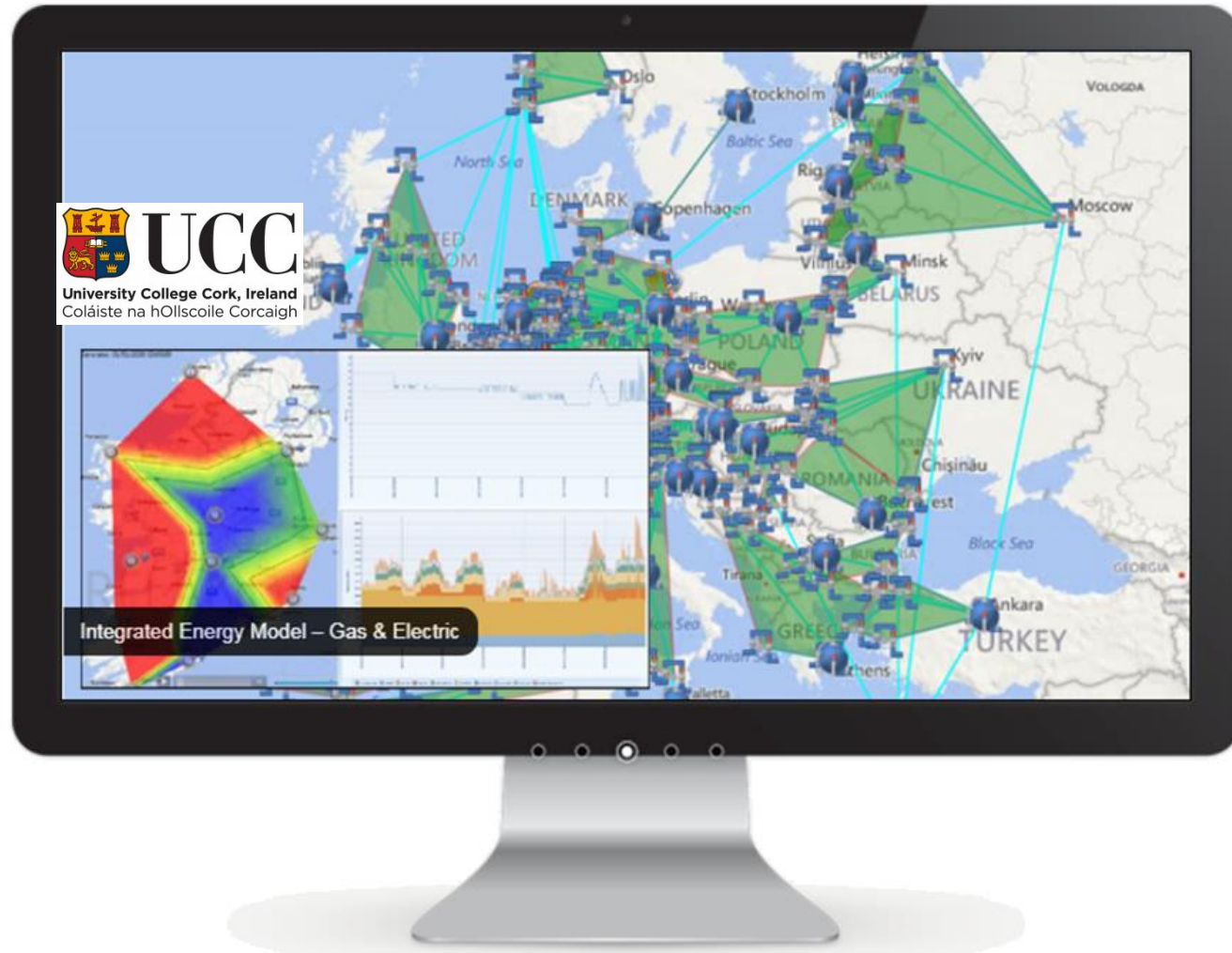


**Household  
Electricity  
Bills**



**Electricity  
Sector  
Revenue**

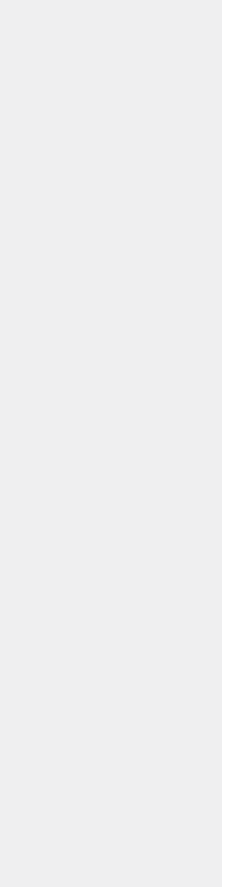
# The method we use to understand the future



# Assumptions that have biggest impact on results are:

- Gas and Coal Prices
- Portfolios are fixed within the year
- One year 'snapshots'

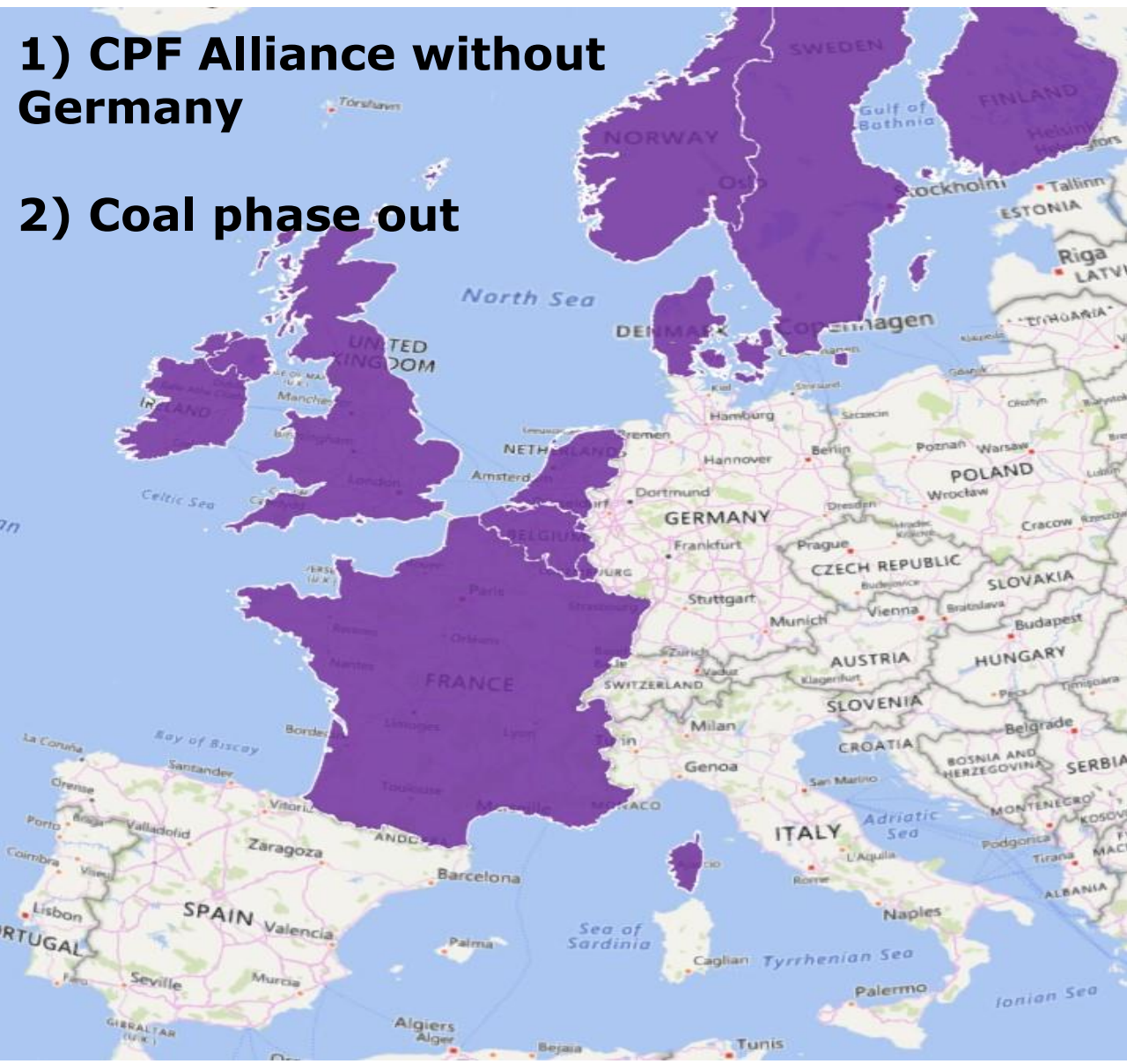
# Results for 2030



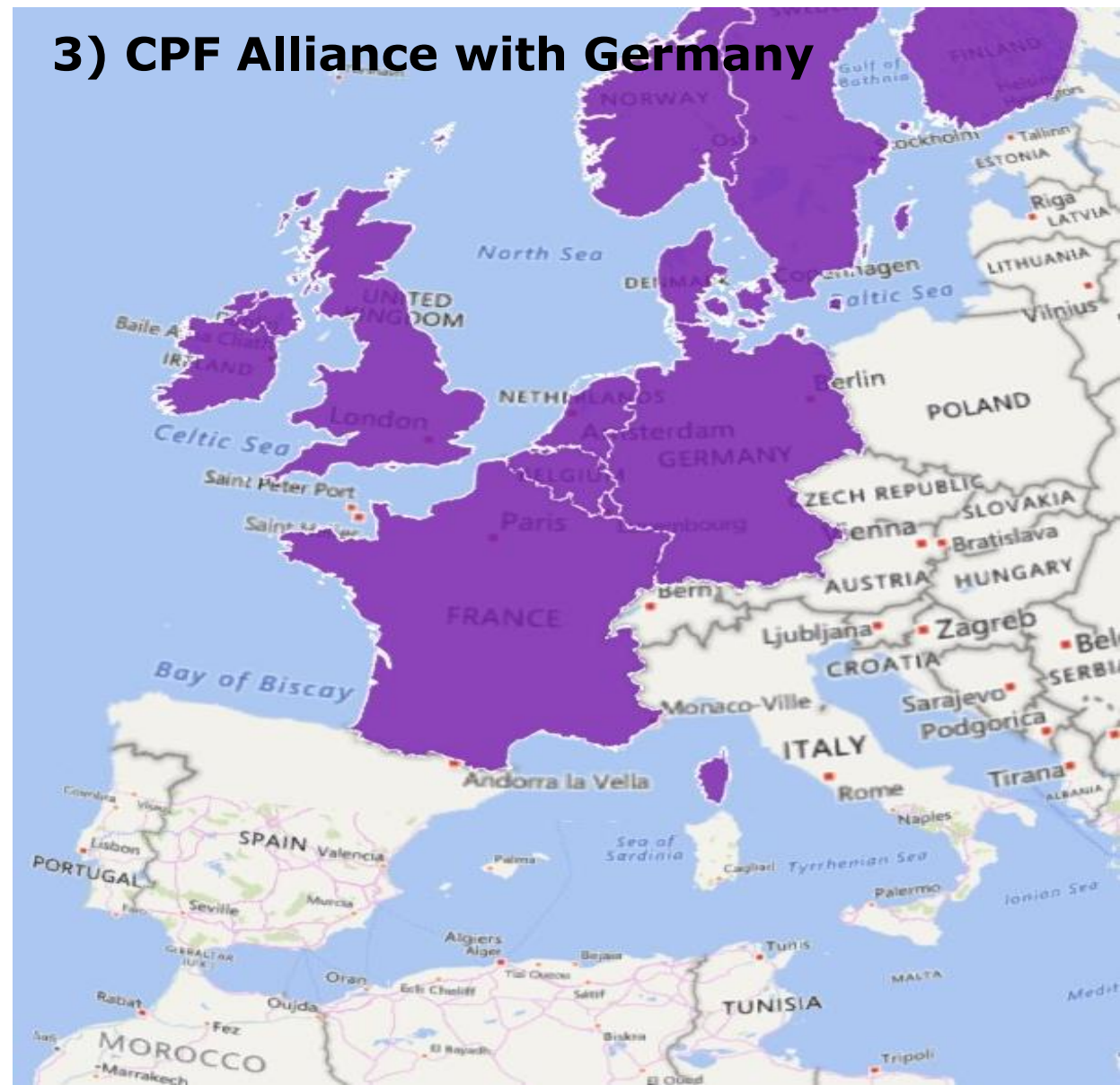
# Three Scenarios are examined

**1) CPF Alliance without Germany**

**2) Coal phase out**

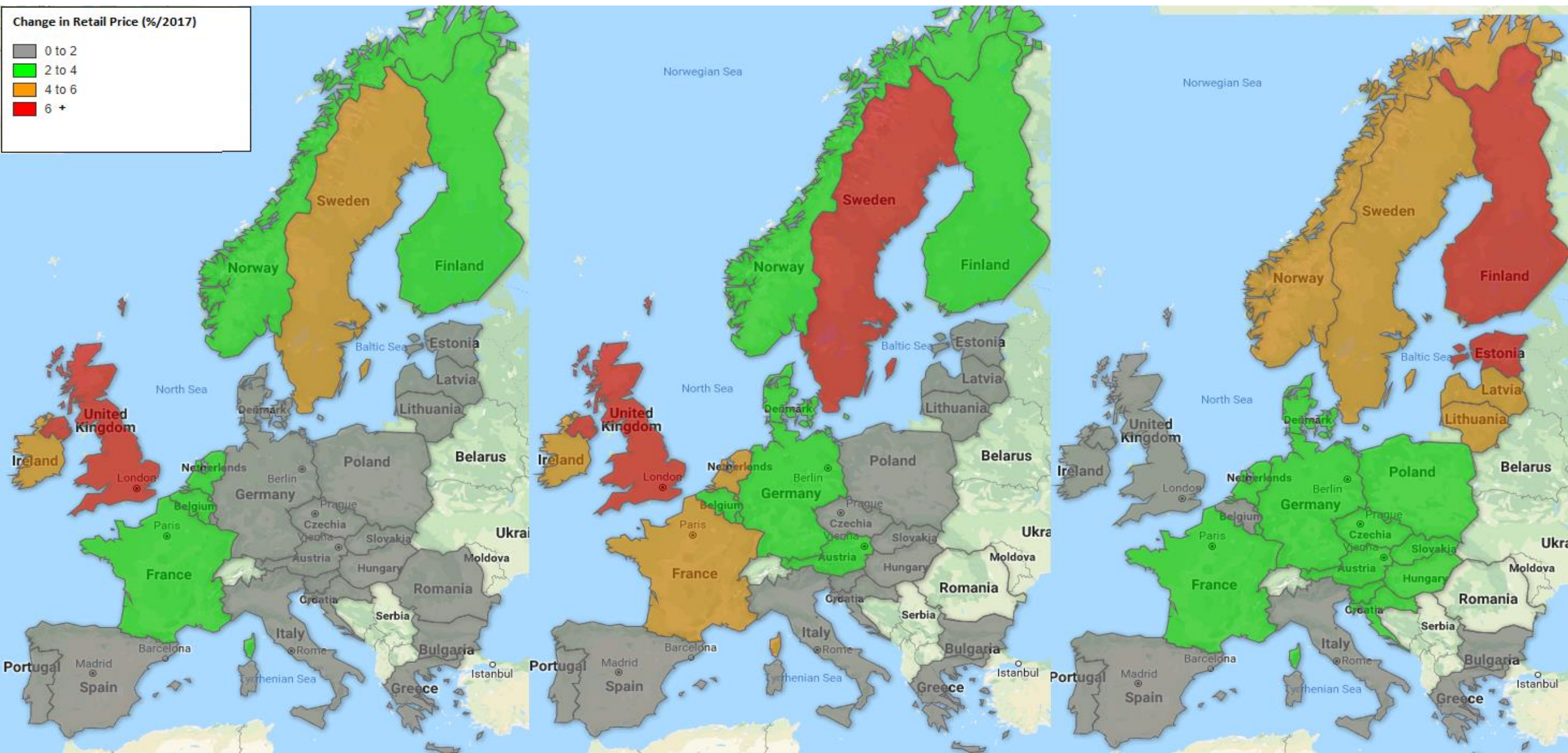


**3) CPF Alliance with Germany**



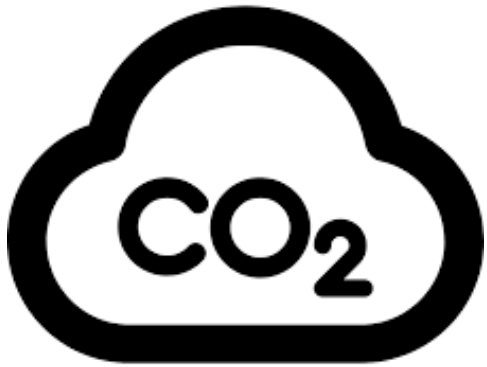


# Impact on Retail Prices 2030 (% change relative to baseline)



# 2030 EU Wide Results for Carbon Price Floor

(Select Member States without Germany)



Emissions  
**-4MT**



Government  
Revenue  
**+ 2bn**



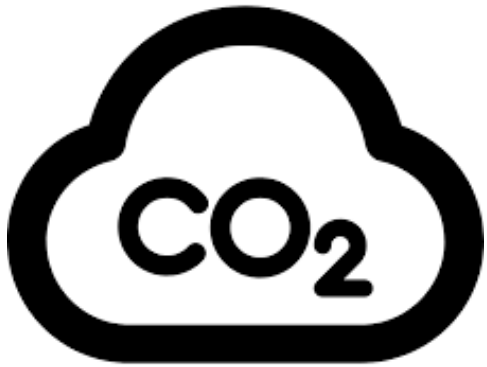
Household  
Electricity Bills  
**+3%**



Electricity Sector  
Revenue  
**+3%**

# 2030 EU Wide Results for Carbon Price Floor

(Select Member States with Germany)



Emissions  
**-20MT**



Government  
Revenue  
**+ 6bn**



Household  
Electricity Bills  
**+4%**

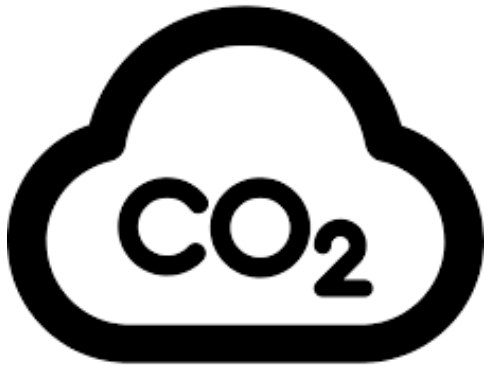


Electricity Sector  
Revenue  
**+4%**



# 2030 EU Wide Results for No Carbon Price Floor

(Select Member States Coal Phase out)



Emissions  
**-31MT**



Government  
Revenue  
**0bn**

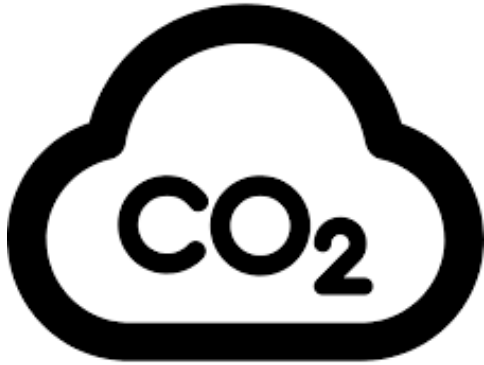


Household  
Electricity Bills  
**+2%**



Electricity Sector  
Revenue  
**+2%**

# Ireland Only Results



Emissions  
**-4MT**



Government  
Revenue  
**+60m**

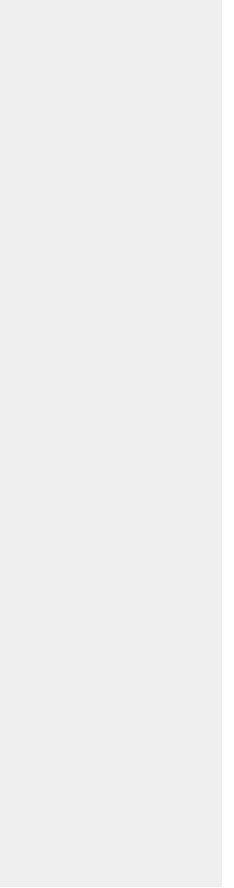


Household  
Electricity Bills  
**1-4%**



Electricity Sector  
Revenue  
**+4%**

# Policy Insights



## Policy Insights

- Both the Carbon price floor and Coal Phase out **will reduce emissions**
- Impact on **consumer bills is modest**
- The **inclusion of Germany** in an alliance is important-coordination minimises competitiveness impacts

## Policy Insights

- A CPF sends a strong policy signal but must be sufficiently high to **counter coal/gas price differentials**
- A strong CPF will also incentive other **low carbon sources**
- A coal phase out delivers **strongest emissions reduction** but may not incentive other low carbon sources

## Policy Insights

- A CPF has the benefit of delivering an element of certainty to electricity industry

## Further Policy Considerations

- The impact on renewable subsidies needs to be considered
- The impact of cancelling EUA's needs to be considered
- The impact on heavy Industry should be carefully reviewed

Thank you



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