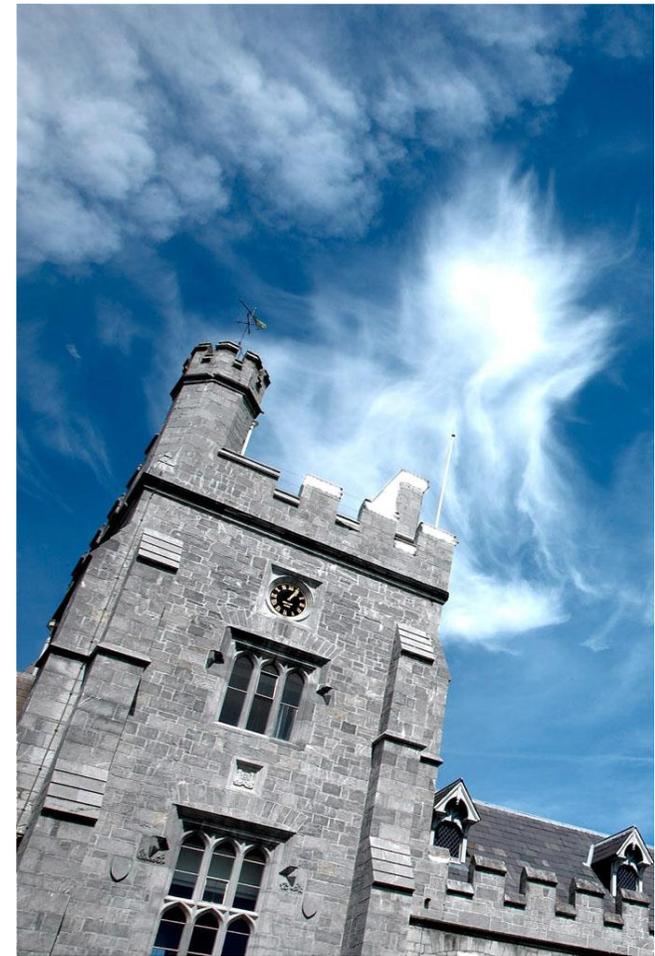
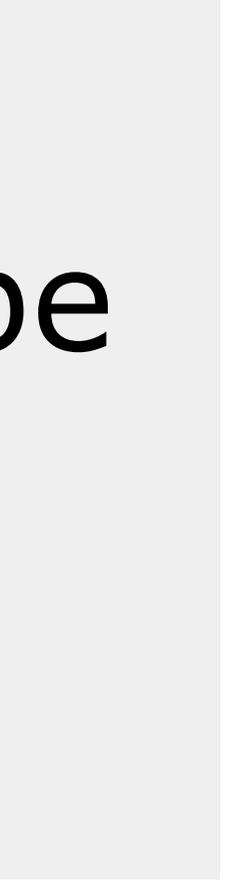


The Impact of a Carbon Price Floor on European Electricity Markets

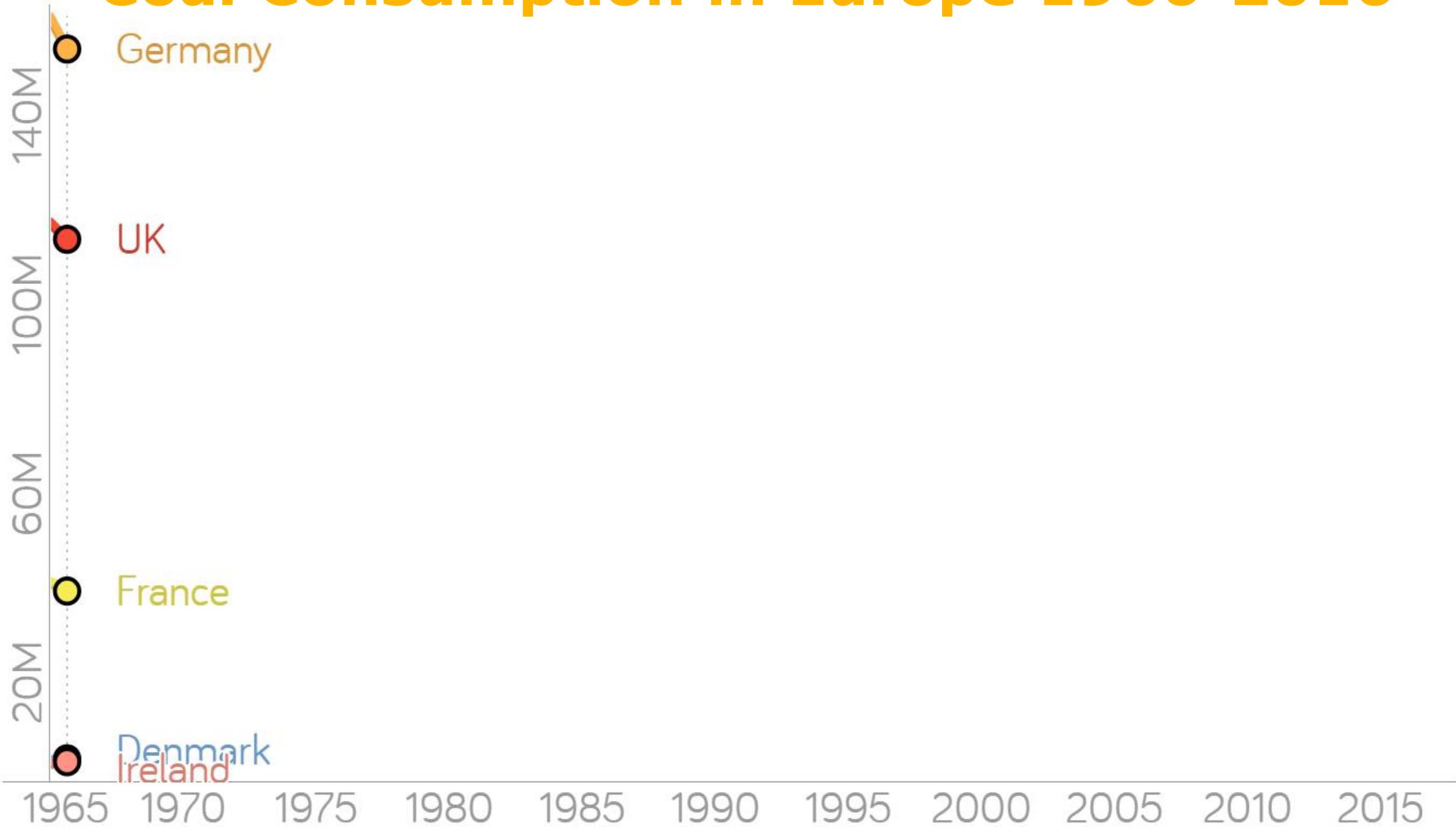
Paul Deane, Celine McInerney, Ellen O'Connor and Bernadette Power



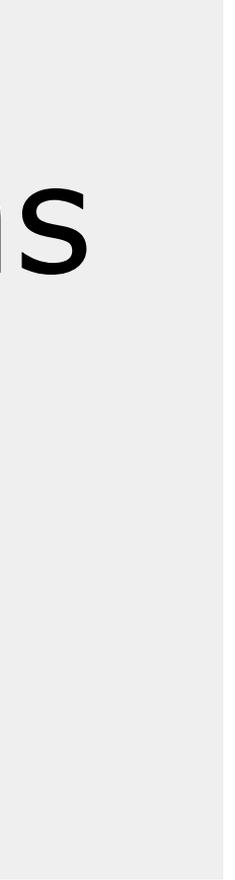
A short history of Coal In Europe

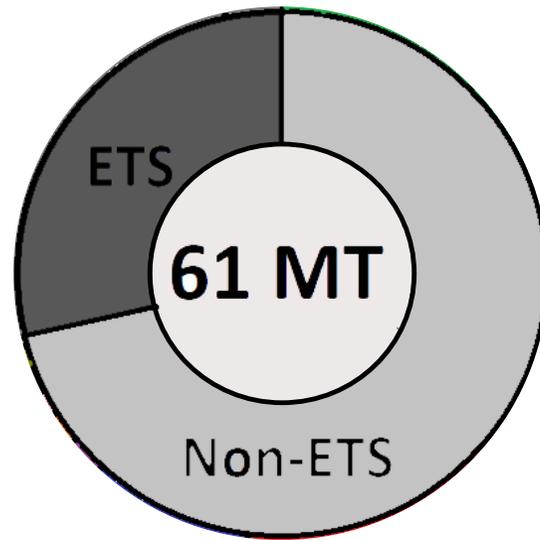


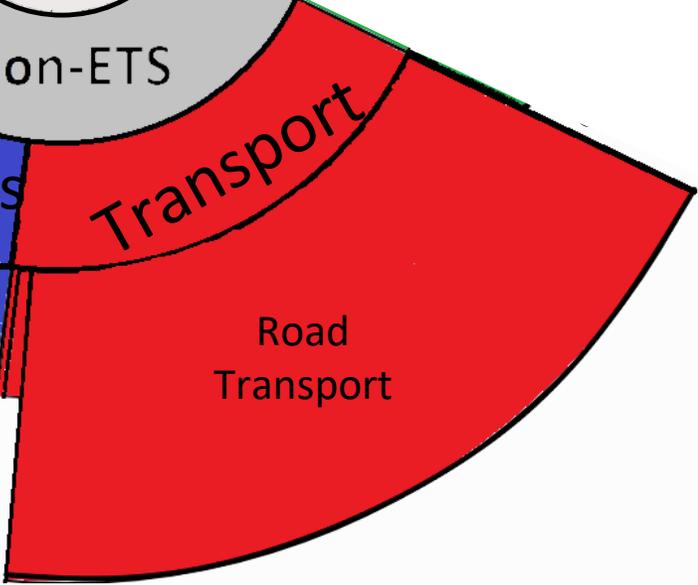
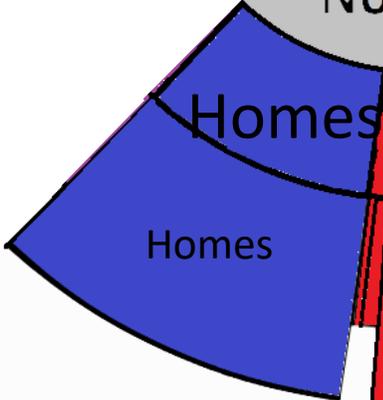
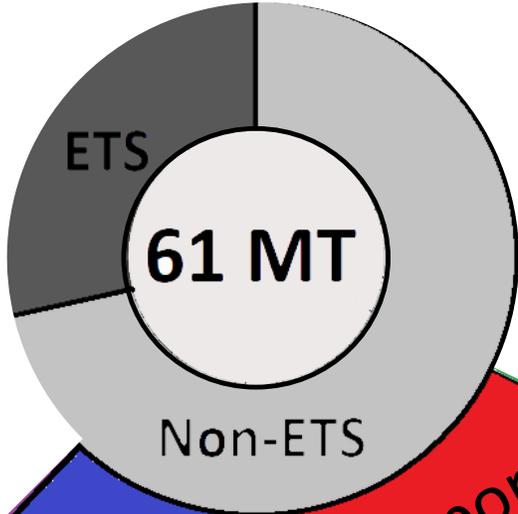
Coal Consumption in Europe 1966-2016



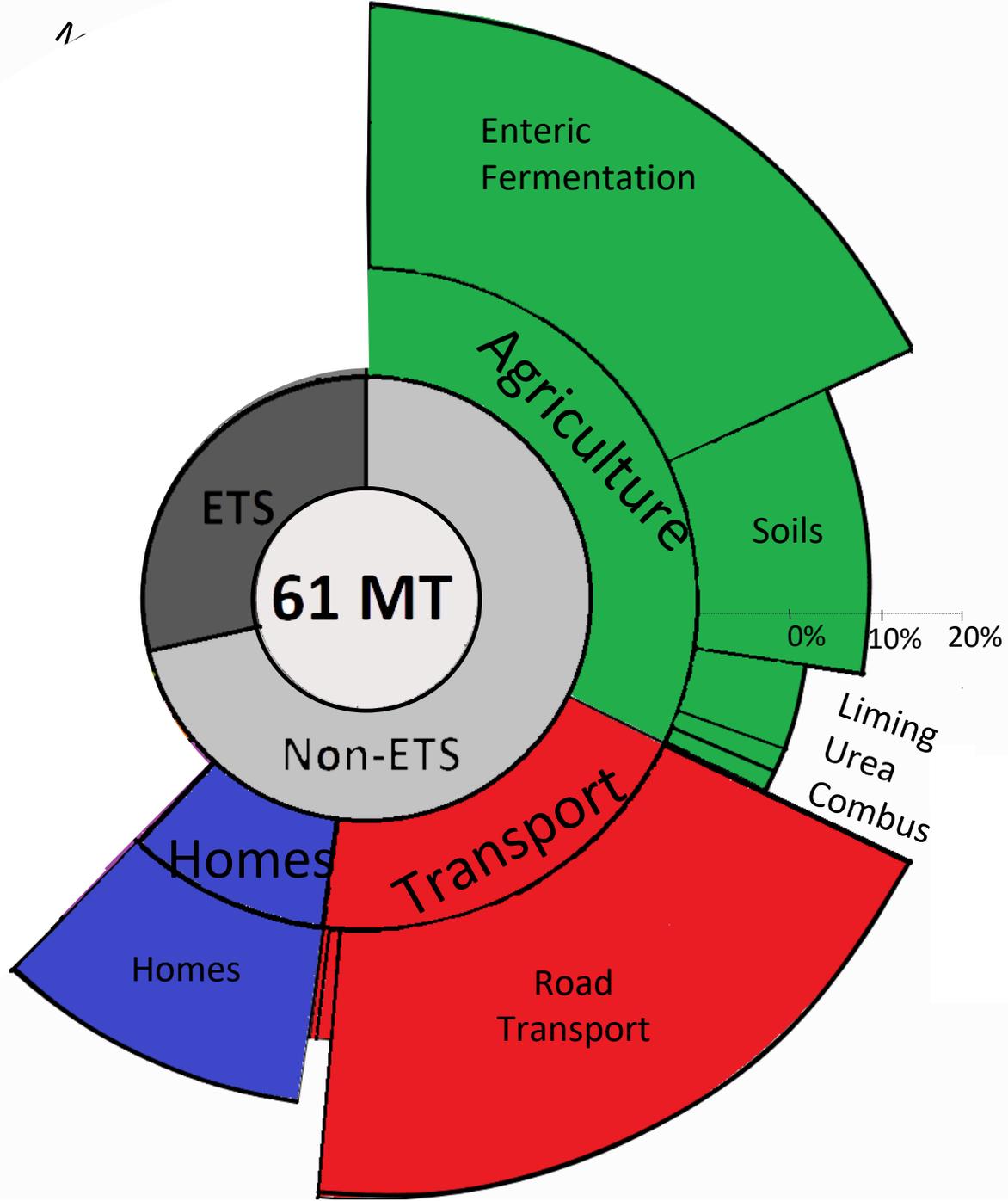
Ireland: Policy and Emissions Context







1



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**

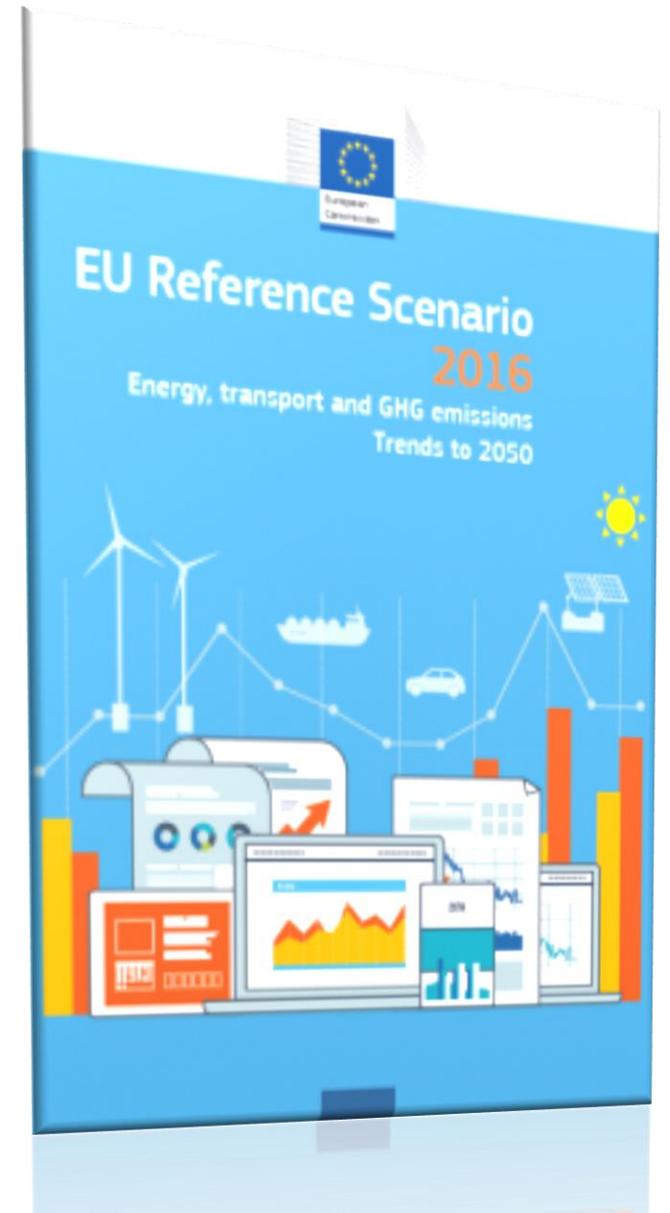
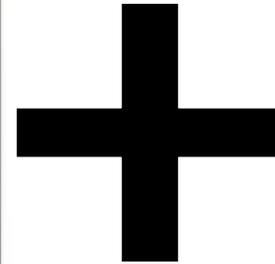
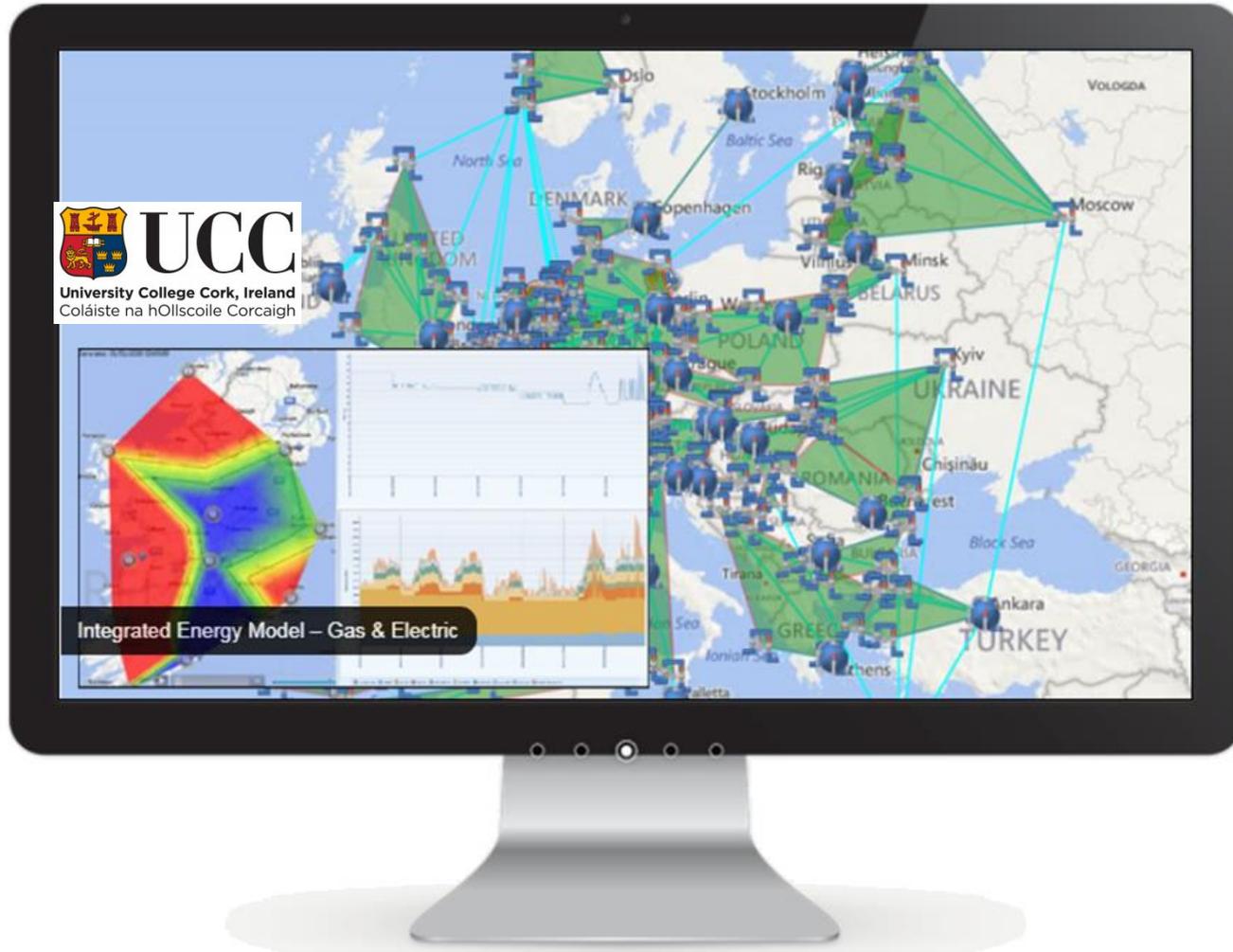


**Household
Electricity
Bills**



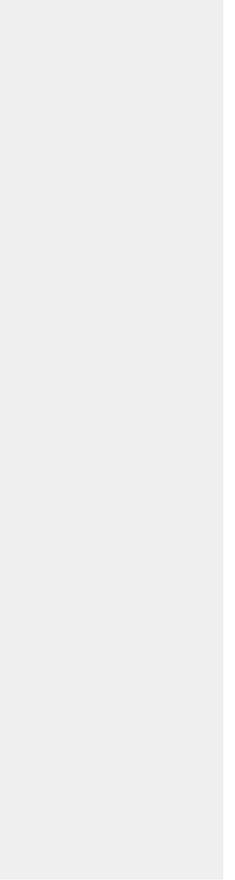
**Electricity
Sector
Revenue**

The method we use to understand the future

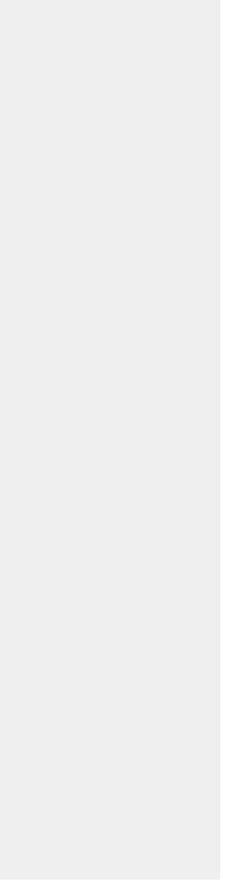


Assumptions that have biggest impact on results are:

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



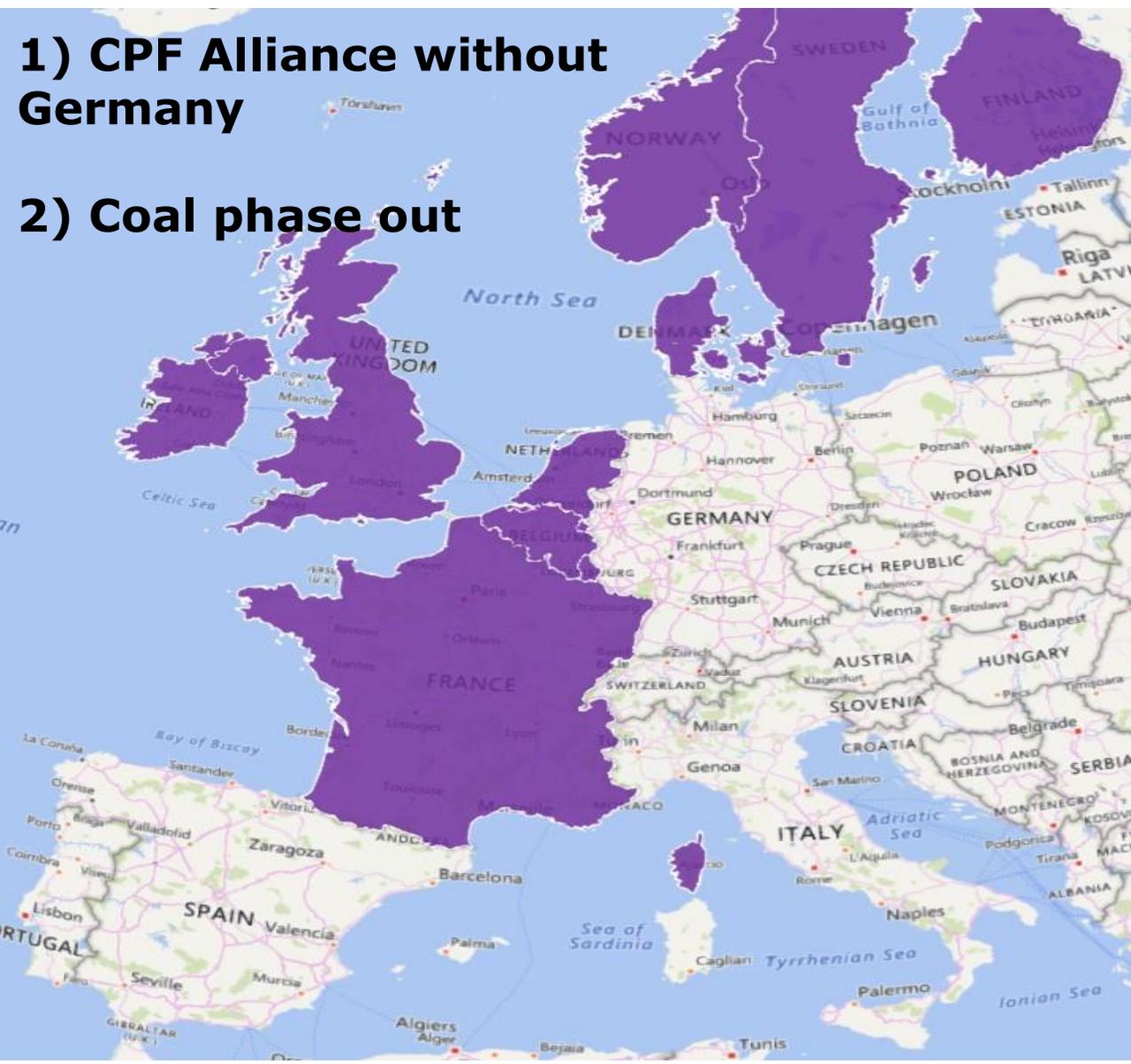
Results for 2030



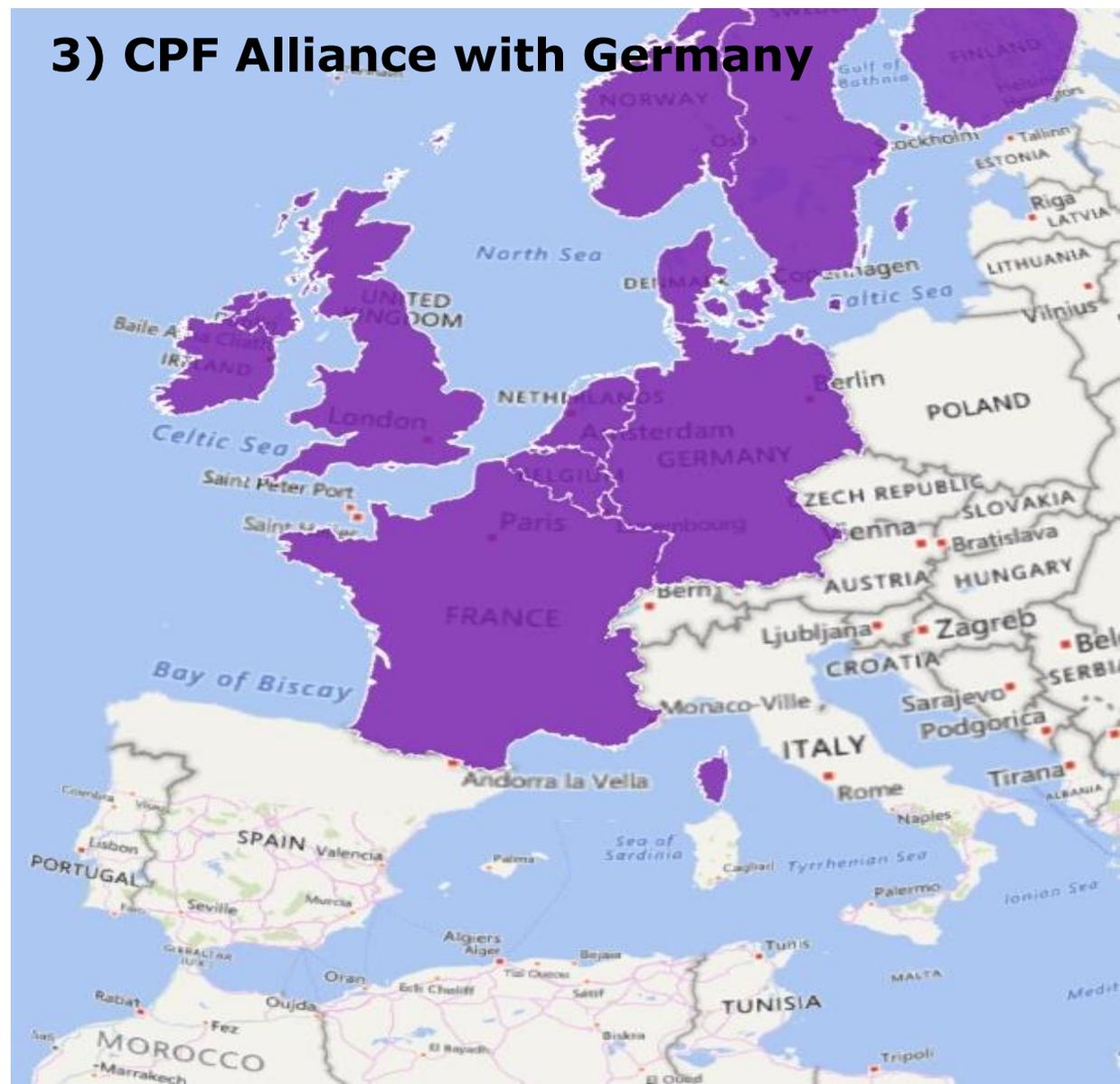
Three Scenarios are examined

1) CPF Alliance without Germany

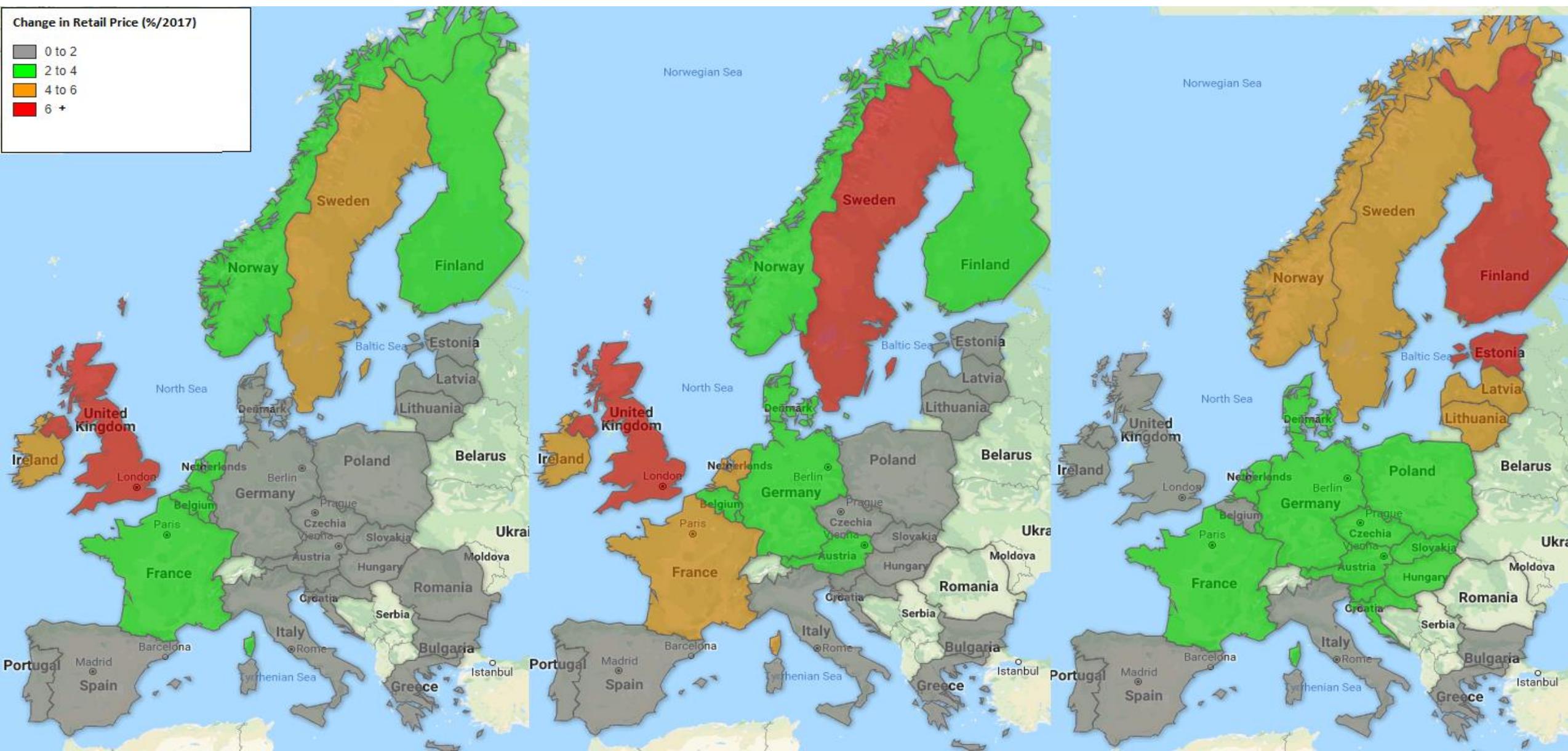
2) Coal phase out



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



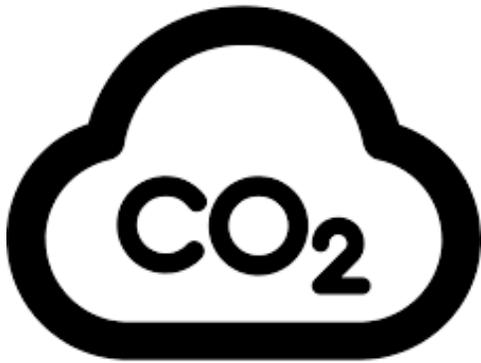
Household
Electricity Bills
+3%



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

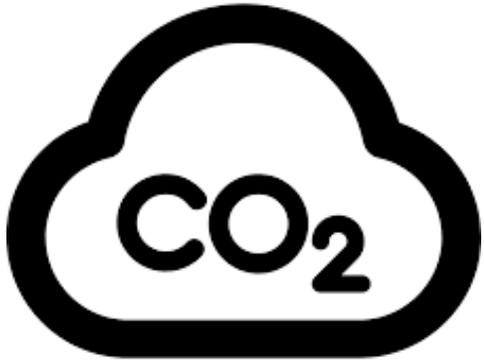


Household
Electricity Bills
+2%



Electricity Sector
Revenue
+2%

Ireland Only Results



Emissions
-4MT



Government
Revenue
+60m

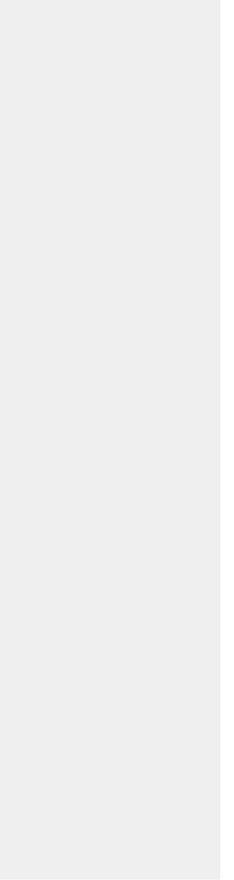


Household
Electricity Bills
1-4%



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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