

# MARPOL: WHAT IS IT?

NOX SOX LEVELS

- It is the prevention of pollutant on the marine environment by ships (air pollution tax)
- In 1997, the Annex IV of Marpol was adopted, in which regulations were set on Sulphur OXIDE (SOX) and NITROGEN OXIDE (NOX), emissions from ship exhausts. In 2010 the Annex were revised to become much more stringent.
- As of 2011, the Baltic Sea and North Sea were already part of an ECA (Emission controlled Area).



WHAT DOES IT MEAN?

**MARPOL**  
(MARine POLLution)

## WHERE IS IT APPLICABLE?

The new SECA zone is marked by the segmented blue areas. From 2020 this will also include the Irish Sea.

2015 2020



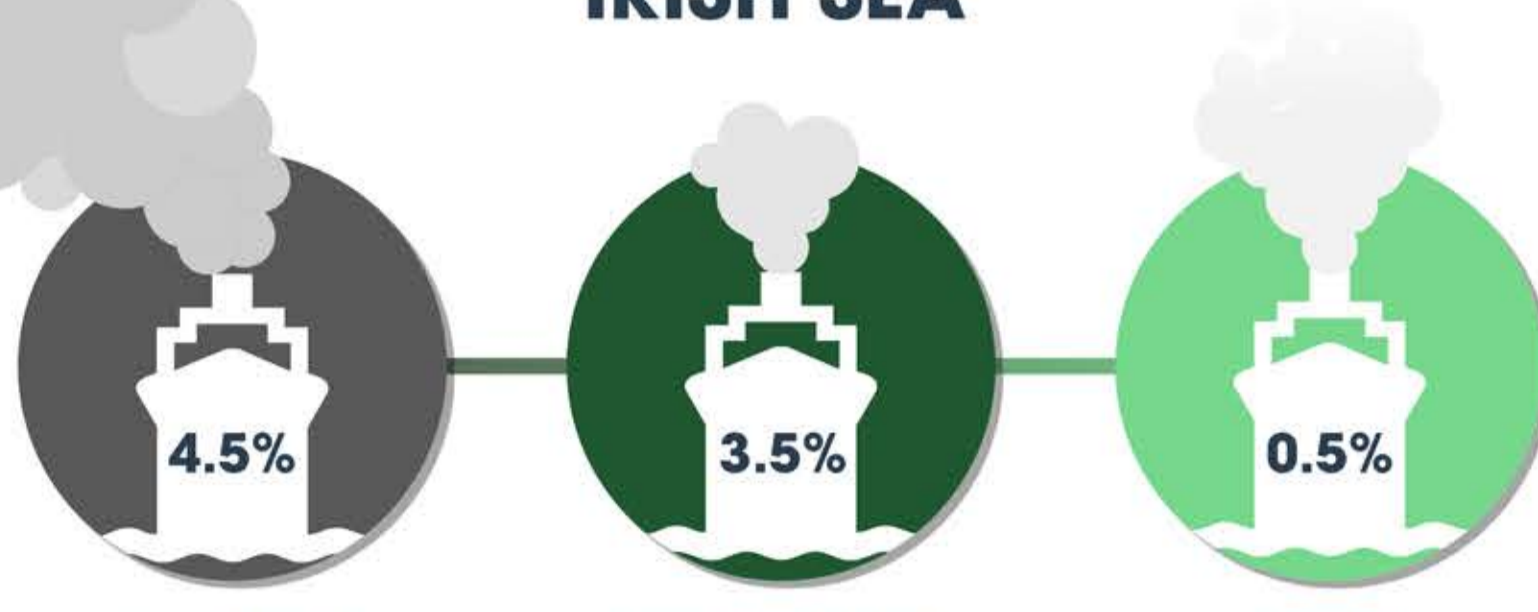
WHAT DOES IT MEAN?  
**SECA zone**  
(Sulphur Emission Controlled Area)

## SULPHUR EMISSION TARGETS

### BALTIC & NORTH SEA



### IRISH SEA



## WHAT MAJOR FACTORS AFFECT HOW MUCH FUEL GETS BURNT?

SIZE OF SHIP



HOW MUCH CARGO IS LOADED?



HOW FAST DOES THE FERRY TRAVEL?



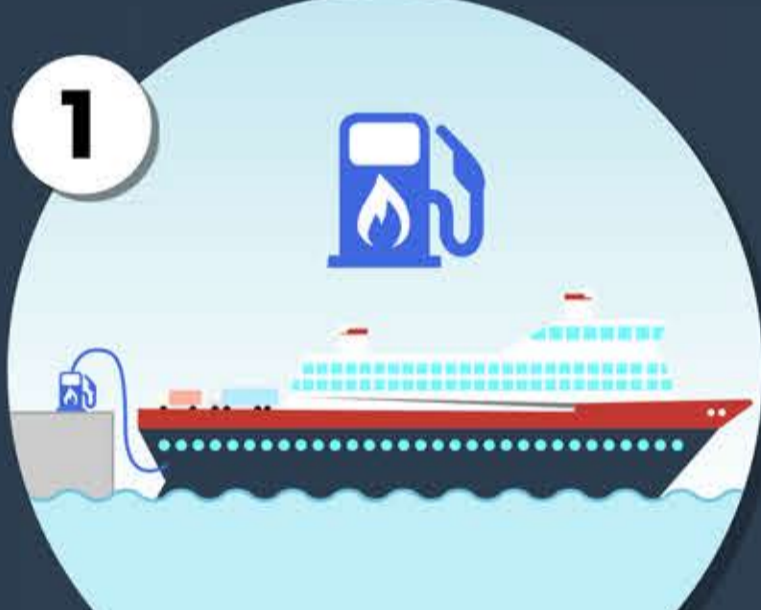
HOW EFFICIENT IS THE SHIPS ENGINE?



LENGTH OF YOUR CROSSING



## WHAT ARE THE FERRY COMPANIES DOING TO COMPLY?



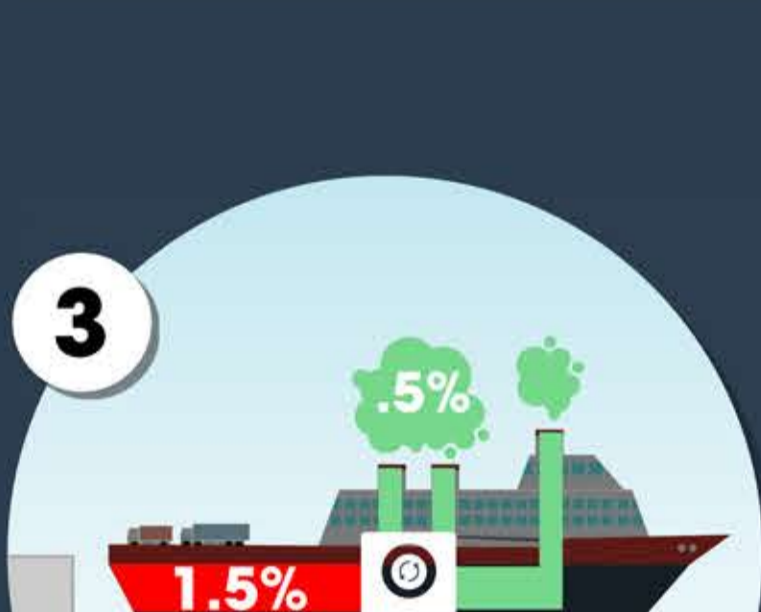
**NEW GAS POWERED SHIPS**

€270 Million  
Brittany Ferries (cancelled order due to cost)



**HYBRID BATTERY POWERED SHIPS**

€14 Million  
Scandlines



**FIT SCRUBBERS (EXHAUST FUEL CLEANSERS)**

€5 Million per ship  
DFDS



**USE MGO FUEL LESS .1%**

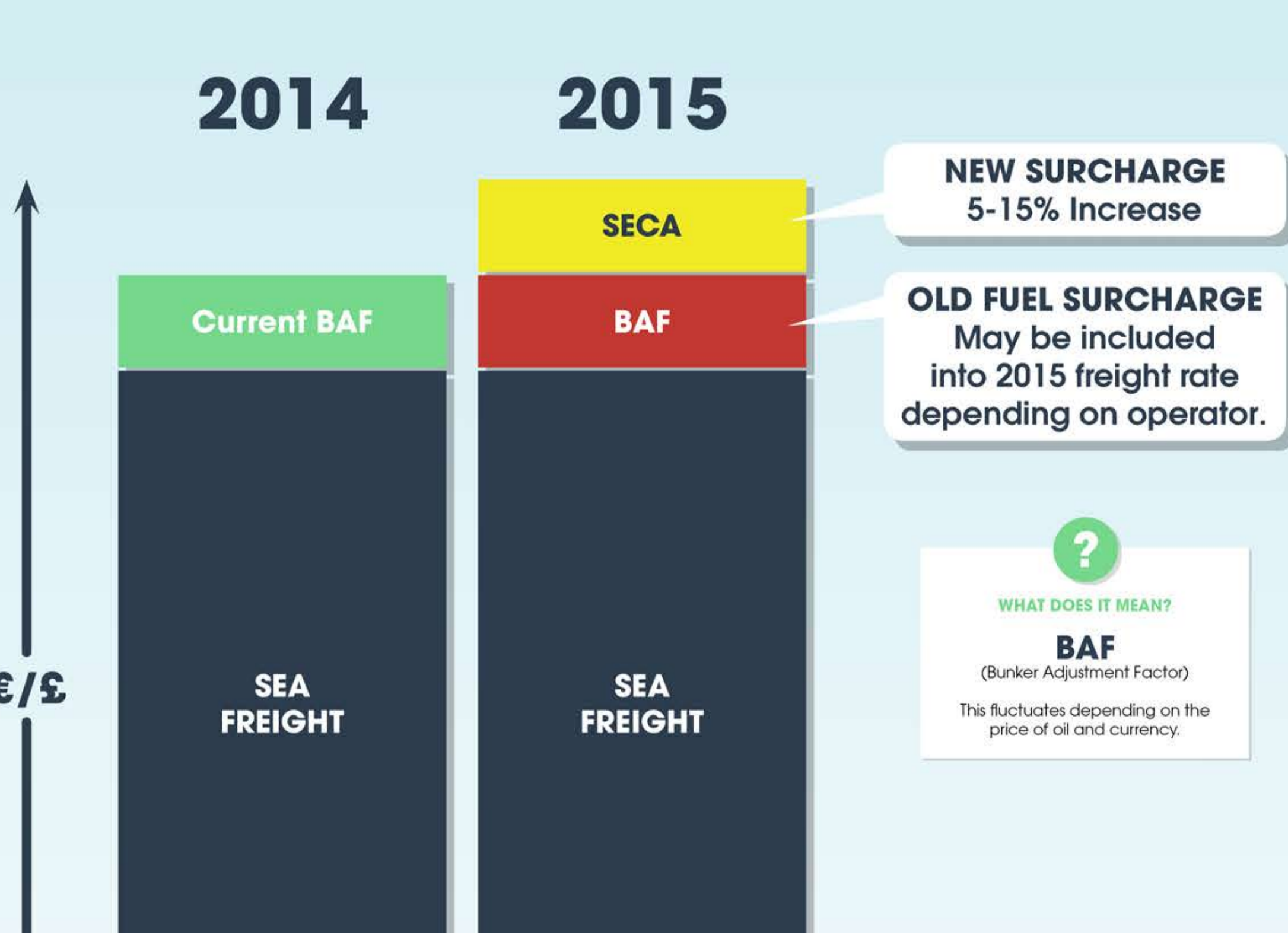
€220 per tonne  
Brittany Ferries

## HOW WILL THIS AFFECT ME?

*"We are going to have to increase prices by around 15%"*

CEO Stena Line

2014 2015



WHAT DOES IT MEAN?  
**BAF**  
(Bunker Adjustment Factor)  
This fluctuates depending on the price of oil and currency.