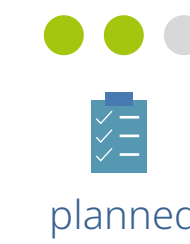


Overview on key hydrogen support policies

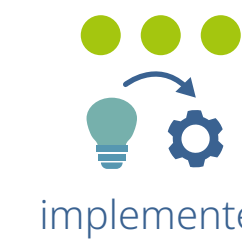
Selected examples (1/2)



considered


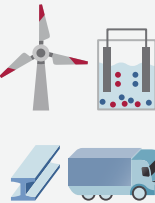




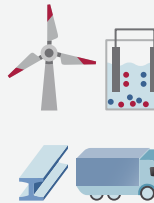

planned







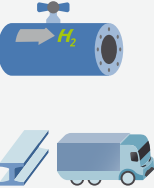

implemented





Impact type  Penalizing	Target sector  Upstream Downstream
Emission taxation	
Carbon emissions are taxed through the state which can incentivize the switch to low-carbon technologies like hydrogen.	
Example  Carbon tax Sweden ●●●	




Impact type  Penalizing	Target sector  Upstream Downstream
Emission trading	
Emissions require certificates which can be purchased for a market-based price which can incentivize the switch to low-carbon technologies like hydrogen.	
Example  ETS EU ●●●	



Impact type  Penalizing	Target sector  Downstream
Carbon border adjustment mechanism	
Goods imported from a jurisdiction with lower carbon pricing are taxed according to the difference in carbon pricing which can incentivize the switch to low-carbon technologies like hydrogen.	
Example  CBAM EU ●●●	

Impact type  Penalizing	Target sector  Midstream Downstream
Quotas	
Mandated shares of hydrogen or derivatives facilitate initial demand ramp-up. E.g., gas grid blending quotas for midstream or consumption quotas in the chemicals and refining sector.	
Example  Quotas on aviation fuel and steel Germany ●●●	

Impact type  Rewarding	Target sector  Downstream
Contracts for difference	
Opex funding which covers the difference between a pre-determined strike price and the market price. The strike price is typically determined through competitive tenders. In cases where the market price exceeds the strike price the producer typically has to pay back the surplus.	
Example  H2 Global ●●●  SDE++ ●●●	

Impact type  Rewarding	Target sector  Downstream
Carbon contracts for difference	
Opex funding which covers the difference between the abatement cost of a low carbon technology in the form of a strike price and the current carbon taxation or emission trading price. The strike price is typically determined through public tenders.	
Example  CCfDs for industry ●●●	

Impact type  Rewarding	Target sector  Upstream
Feed in tariff	
Fixed price for every unit inserted into the system is provided by a government body. Typical determination of fixed price is either top-down through the government or through competitive tenders.	
Example  Doesn't exist for hydrogen value chain but implemented and proven in adjacent sectors, e.g., renewable electricity	

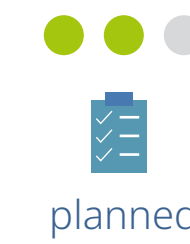
Impact type  Rewarding	Target sector  Upstream
Feed in premium	
Similar to Contract for Difference. Producer is paid the difference between a predetermined strike price and the market price. The strike price is typically determined through competitive tenders. In cases where the market price exceeds the strike price the producer typically has to pay back the surplus.	
Example  Doesn't exist for hydrogen value chain but implemented and proven in adjacent sectors, e.g., renewable electricity	

Overview on key hydrogen support policies

Selected examples (2/2)



considered



planned



implemented



Impact type Rewarding	Target sector Upstream
Floor prices	
Minimum price for a product is set by regulation to ensure a minimum return for the producer, thereby reducing risk exposure and increasing bankability.	
Example Doesn't exist for hydrogen value chain but is being discussed for instance for emission trading mechanisms and electricity markets.	

Impact type Rewarding	Target sector Upstream
Tax credits	
Tax credit on, e.g., every kg of hydrogen sold which reduces the amount of tax an entity is required to pay and effectively enables the price reduction of hydrogen.	
Example Production tax credit ● ● ●	

Impact type Rewarding	Target sector Midstream
Regulated returns	
Operators of transport infrastructure can collect a regulated return on their investments from users which typically decreases over time to incentivize efficiency increases.	
Example Doesn't exist for hydrogen value chain but implemented and proven in adjacent sectors, e.g., renewable electricity	

Impact type Rewarding	Target sector All
Financial support mechanisms	
Typically state provided financial support for capex investments, often through low interest loans or grants.	
Example IPCEI ● ● ●	

Impact type Uncertainty reducing	Target sector All
Government targets and strategies	
By providing clear ambitions towards the future, governments can increase market certainty by outlining a clear path forward including targets for production capacities and end-use adoption, ideally complemented by a clear roadmap on how to achieve these targets.	
Example National Hydrogen Strategy ● ● ●	

Impact type Uncertainty reducing	Target sector Upstream Downstream
Certification	
Robust certification with regards to environmental and societal characteristics of the product improve consumer trust and enable demand. Internationally harmonized certification systems facilitate international trade.	
Example H2 Global ● ● ●	

Impact type Uncertainty reducing	Target sector Upstream Downstream
Fixed offtake agreements	
By ensuring offtake of the product through a public body, project risks and associated costs for financing can be decreased. Longer term agreements are typically favourable for producers while shorter term agreements support consumer flexibility.	
Example H2 Global ● ● ●	

Sources

