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# **Policy: Good Practices & lessons learnt**

**Calliope Panoutsou,  
Imperial College London**  
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# Objectives

## **Improve evidence available to policy and industry for future market uptake.**

- ❑ Which countries/ regions have policies and what type of policy mechanisms?
- ❑ Which are key assets for good performance?
- ❑ What lessons can be learnt so far?
- ❑ Degree of transferability
- ❑ Example of good practice policies
- ❑ Barriers which lessons learned helps to remove

# Good practices in policy for advanced biofuels



- Twelve good practices in policy (Denmark, Finland, Germany, the Netherlands, Italy, Slovakia, Sweden, United Kingdom, Brazil, Canada, the European Union and California) analysed so far as renewable fuel programs and strategies that have good performance in the following key assets:
  - policy mix which is well integrated in the national policy,
  - individual targets for advanced biofuels and special provisions/ strategic considerations for the use of advanced biofuels in transport market segments with low or limited available alternatives for decarbonization, and
  - active stakeholder engagement from industry and policy.
- Work performed jointly with stakeholders through interviews and online survey



# Why a policy mix?



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- Advanced biofuels form part of the energy carriers that derive from biomass within the overall biobased economy concept.
- As such they should be supported with policy frameworks that account for innovation and resource efficiency across the value chain.
- Individual sector targets which do not account for improved value chain efficiency and cross sector implications have been partly successful and, in many cases, have resulted in conflicts and market imbalances.
- A balanced approach for future policy formation at all governance levels is to ensure there is an appropriate policy mix that is integrated along the value chain components (biomass supply, conversion, end use) .





# Types of policy mechanisms

- Regulations are rules that control the actions of companies. In biomass value chains these can include quota obligations product standards, tax exemption and reduction, targets and qualifying criteria for incentives, feed-in-tariffs, subsidy, green procurement, etc. .
- Financing mechanisms include provisions for financial support and taxation and can include biomass feedstock premiums, capital grants, technology and feedstock related feed in tariffs or premiums, tax incentives, user charges, research funds, etc.
- Information provision mechanisms include soft actions for the dissemination of best practices and successful lessons learnt, promotion, capacity building, awareness raising, etc.



# Policy mechanisms for advanced biofuels per value chain step, type of policy and market stage development



	Mechanism	Biomass supply	Conversion	End Use
<b>Regulatory</b>	Mandate		Early markets	Mature markets
	Quotas		Mature markets Sustain markets	Sustain markets
	Standards	Mature markets Sustain markets	Mature markets Sustain markets	
	Targets/ Obligations	Mature markets		Mature markets
	Green Procurement	Sustain markets		Sustain markets
<b>Financing</b>	Carbon tax			Mature markets Sustain markets
	Subsidies	Early markets	Early markets	
	Carbon/ GHG certificates			Mature markets Sustain markets
	Tax exemptions		Mature markets	
	Research funds	Early markets	Early markets	
<b>Information provision</b>	Strategy		Early markets	Early markets
	Promotion	Early markets	Early markets	Early markets
	Capacity building	Early markets		Early markets
	Networking	Mature markets Sustain markets		Mature markets Sustain markets



# Why individual targets are essential for advanced biofuels and provisions for aviation, marine, heavy duty?



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- The sector is relatively new, and most value chains still require improvements across the value chain.
- This implies high investment risks. Without a dedicated and consistent policy in place there industrial and investment confidence is reduced and this results in low market uptake.
- Future policy should have clarity, quantitative targets and trajectories for advanced biofuels. It should be in line with the long- term decarbonisation plans that foresee a shift of their use from light duty vehicles to heavy duty vehicles, aviation and marine.





# Why stakeholders' engagement, endorsement and bottom up solutions work best?



- Stakeholders are central for the successful market uptake of advanced biofuels. Their active and continuous involvement, consultation, endorsement and approvals during policy formation, implementation and monitoring is vital for the future of the sector.
- Future policy making must involve stakeholders, inform them and steer efficient 'transport behavior' to individuals.



# Policy mechanisms for advanced biofuels per value chain step, type of policy and market stage development



	Regulations					Financing					Information provision				Aviation	Marine	Heavy duty	Development stage
	Mandate	Quota	Standards	Targets	Green procurement	Carbon tax	Subsidies	Certificates	Tax exemption	Research funds	Strategy	Promotion	Capacity building	Networking				
Denmark	X	X	X	X		X	X		X	X	X			X				
Finland	X	X	X	X		X					X				X		X	
Germany	X		X	X		X		X	X	X								
Italy	X	X	X	X			X	X										
Netherlands			X	X				X			X				X		X	
Slovakia	X		X						X									
Sweden		X	X			X			X		X							
United Kingdom	X	X	X	X				X										
European Union	X		X	X							X							
Brazil						X	X				X							
California			X			X	X				X		X					
Canada			X			X					X		X					



# Issues examined per key asset



## Policy mix

- number and type of policy mechanisms (regulatory, financing and information provision)
- integration across the value chain (feedstock production, conversion, end use)

## Target setting

- specific target for advanced biofuel
- steer and support for aviation, marine and heavy-duty road transport
- adequate sustainability targets

## Network of stakeholders from policy and industry

- Information provision mechanisms
- Cross ministerial collaboration
- Industrial engagement



# (Initial) Good practice performance for the understudy countries, EU and California



G	Denmark	Finland	Germany	Netherlands	Italy	Slovakia	Sweden	United Kingdom	European Union	Brazil	California	Canada
<b>Policy mix</b>												
Number & type	Green	Green	Green	Green	Green	Yellow	Green	Green	Yellow	Green	Green	Green
Integration	Green	Green	Green	Green	Yellow	Yellow	Green	Yellow	Yellow	Green	Green	Green
<b>Target setting</b>												
Advanced biofuels	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Aviation, marine, heavy duty	Green	Green	Green	Green	Green	Yellow	Green	Green	Green	Green	Green	Green
Sustainability	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
<b>Stakeholders</b>												
Information provision	Green	Green	Green	Green	Green	Yellow	Green	Green	Green	Green	Green	Green
Cross ministerial	Green	Green	Green	Green	Yellow	Yellow	Green	Green	Yellow	Green	Green	Green
Industrial engagement	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green



# (Initial) Lessons learnt, degree of transferability, examples of good practice policies they can be related to and barriers which they can help removing.



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Lessons	Key asset(s)	Development stage(s)	Degree of transferability	Example of good practice policies	Barriers which lessons learned helps to remove
Strategy and vision should be carefully discussed and analysed with the local community and the industrial actors who are likely to invest in advanced biofuels	Stakeholders	Initial	High since this is one of the first steps in the communication of policy makers and industries in order to agree on the focus of the strategy and introduce relevant policy mechanisms	Denmark has a €67 million plan for sustainable transportation development between 2020 and 2024 and a long-term strategy in place where biofuels will be mainly used in heavy-duty vehicles and aviation, this sends a positive message to the market players and security.	High capital costs, high risk investment and lack of long-term and unstable policy environment makes it difficult for the investors to invest. Difficulty to access the existing support schemes.
Policy must ensure wide acceptance and endorsement of the measures by local stakeholders	Stakeholders	Initial	Low to moderate as public acceptance is subject to change after certain periods of time so the process requires continuous attention, adaptation and communication of consistent messages.		Lack of policy mechanisms which bridges the gap between conventional and advanced biofuels. Not enough information provisions which raises the awareness and share information about the innovative technologies.

# (Initial) Lessons learnt, degree of transferability, examples of good practice policies they can be related to and barriers which they can help removing.



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Lessons	Key asset(s)	Development stage(s)	Degree of transferability	Example of good practice policies	Barriers which lessons learned helps to remove
<b>Quota have been a successful measure for the increase of the overall biofuels share in transport</b>	Policy mix Target setting	Initial Early	<b>High</b> since this is one of the most applied mechanism in the biofuels sector and it has led to high market uptake	Obligatory biofuel quota system with tradable or non-tradable green certificates. DE, FI, DK, IT, SK, NL and UK.	Lack of dedicated policy support to promote biofuel share among all renewable sources.
<b>Set up mechanisms to attract capital</b>	Policy mix	Early	<b>Low to moderate</b> as it is strongly reliant to the economic situation and competitiveness of individual countries and regions as well as investment environment	Investment subsidies and support schemes. DK has subsidy schemes. NL has subsidy programmes targeted for market players and producers like IBB for innovative Biofuels and TAB for installing filling stations.	Lack of policy support to provide security for the industry



# Good practices factsheets

<http://www.advancefuel.eu/contents/publications/advancefuel-goodpractices-factsheet.pdf>



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# (Initial) concluding remarks



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- At initial market development, targets and policy must be discussed with all stakeholders and ensure wide acceptance and endorsement.
- At early market stage, all relevant policy mechanisms and tailored financing should be tailored to fit the national value chains and available infrastructures.
- At mature development stage, policy should ensure long term consistency, provide high clarity of strategic messages and secure long-term industrial commitment.





# Next steps



- Refine & match country policy profiles for all EU Member States with lessons to be transferred:
- Who learns from whom?
- What lessons can be transferred?



# Thank you for your attention

Calliope Panoutsou  
Imperial College London  
[calliope.panoutsou@imperial.ac.uk](mailto:calliope.panoutsou@imperial.ac.uk)