

New Energy Solutions Optimised for Islands



EUROPEAN ISLANDS FACILITY

## D7.6: Report from islands staff coaching (first part)

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Authors: R2M Solution



## Technical references

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Initial draft	19 July 2023	Cécile Barrère, Sophie Dourlens-Quaranta, Zia Lennard, Ban Rajab Basha	R2M Solution
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Quality control	31 July 2023	Alessandra Montanelli	SINLOC

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# Annex F. Details on SST3

## F-1. SST3 programme

SLOT		DAY 1 - 9th May - TRIP TO THE ORKNEY ISLANDS	
-	-	Arrival at The Orkney Island / Kirkwall	
Participants are free to organize dinner for themselves			
SLOT		DAY 2 - 10th May	SPEAKER
Today's venue is at EMEC - Stromness office			
Part 1 – Objectives: Learn about The Orkney Islands energy landscape and activities (H2 and MRE)			
8:30	9:00	Transfer from Kirkwall to Stromness Meeting point is in front of Kirkwall Hotel (Harbour)	
09:00	10:00	Icebreaker NESOI/SST Introduction, Sophie Dourens-Quaranta, Cécile Barrère, (20') Roundtable Introduction (30')	R2M
10:00	11:00	EMEC introduction Matt Storey, Hydrogen Development Manager at EMEC Noor van Velzen, Project Manager at EMEC Naomi Wood, Marine Energy Business Development Coordinator at EMEC	EMEC
11:00	11:30	Coffee break	
11:30	12:00	David Amos, PlusZero NESOI GO(H2)ME Project presentation (Online) Introduction project + lessons learnt + next steps	PlusZero
Part 2 – Objectives: Island decarbonisation, learn from projects across the EU			
12:00	13:15	Net Zero Island Workshop (Hybrid) Laura Hutton, ICNZ Director, Islands Centre For Net Zero (ICNZ) (15') (online recorded session) Eduard Escolà, CREM, Menorca 2030 Strategy. Roadmap to decarbonizing the energy System of Menorca (15') Melis Yilmaz, Troya Environmental Association, Net zero Islands with Energy Communities (15') Nikolaos S. Argyriou, Municipality of Alonissos, LIFE IP CEI Greece on Circular economy, recycling and waste management (15') Zikouli Effie, Aradippou Municipality, Decarbonising local communities with green hydrogen hubs- a strategy in motion. (15') (Canceled - Med. Leave)	Chaired by Makis Kartalidis
13:15	14:00	Lunch break at EMEC center	





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Part 3 – Objective: Knowledge sharing about Marine Renewable Energy projects			
14:00	15:30	<p><b>Marine Renewable Energy Projects and Q&amp;A - Hybrid</b></p> <p><b>Carly Tait and Catherine Tait</b>, EMEC, WEDUSEA will demonstrate the potential for wave energy by demonstrating the OEBuoy Floating Oscillating Water Column (FLOWC) at Billia Croo to increase experience in real sea conditions with an extended deployment period to confirm performance, availability and reliability. (20')</p> <p><b>Carly Tait, EMEC</b>, TIGER project will drive the growth of tidal stream energy to become a greater part of the energy mix, with significant benefits for coastal communities (20')</p> <p><b>Vasilios Chantziaras</b>, "NEPTUNUS" The municipality of this Greek island has set the priority to switch the energy system to renewable. For this, a suitable location for a wave energy power station will be identified ensuring the protection of the environment. (20') <b>Online</b></p>	EMEC
Part 4 – Objective: Discover EMEC facilities at Stromness			
15:30	17:00	Site visit - Billia Croo Wave test site	EMEC
17:00	18:00	<b>Transfer from Stromness to Kirkwall</b>	
19:30	22:00	Social dinner at The Ayre Hotel	
SLOT	DAY 3 - 11th May		SPEAKER
<p>Today's morning is site visit (Eday island)</p> <p>Afternoon will be spend at EMEC Kirkwall office</p>			
Part 5 – Objective: Electrolyser and tidal test site visit			
-	-	(Morning) Charter boat to Eday starting at ... in Kirkwall harbor 10 Max people: 8 participants + 1 NESOI co-organisers + 1 EMEC	EMEC
-	-	<b>Site visit</b> Electrolyser guided tour	EMEC
13:00	14:30	Lunch break - Kirkwall	
Part 6 – Objective: Hydrogen and clean vessels, understand stakeholders' views			
14:30	16:00	<p><b>Hydrogen and Clean fuel Vessels</b></p> <p>1. Orkney council use of clean fuels at port/vessels studies (new vessel and retrofitting) and planned demonstrations <b>Heather Turnbull, EMEC</b>, Clean fuel floating depot and Crew Transfer Vessels, feasibility studies (20')</p> <p><b>David Hibbert</b>, Orkney Islands Council, Feasibility studies and demonstration projects (20') <b>Online</b></p> <p>2. Italy CNR presentations <b>Stefania Siracusano, CNR</b>, <b>Advanced materials for PEM water electrolysis technology (10') Online</b></p> <p><b>Bonura Giuseppe, CNR</b> - Methanol and dimethyl ether as clean alternative fuels (10') <b>Online</b></p>	Chaired by EMEC
Part 7 – Objective: knowledge sharing about Hydrogen projects on islands			
16:00	17:00	<p><b>Hydrogen projects on islands (Hybrid)</b></p> <p><b>Fanis Christakopoulos, DAFNI</b>, NESOI project Green Hydrogen Ecosystem on Kos Island (15') <b>Online</b></p> <p><b>Alex Coronati, EDP NEW</b>, NESOI project H2AzoRES (15') <b>Online</b></p> <p><b>Klaudia T. Tolstow, Dalane Energi AS, ROBINSON</b> (Smart integration of renewable energy on <u>industrialised islands</u>) and hydrogen. (15') <b>Online</b></p>	Chaired by Makis CERTH
18:00	20:00	Pub evening at "21" at 21 Albert Street	



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SLOT		DAY 4 - 12th May	SPEAKER
<b>Venue is EMEC Kirkwall office, Warness Park</b>			
<b>Part 8 – Objective: Discover NESOI platform opportunities</b>			
9:00	10:00	<b>NESOI platform (Hybrid session)</b> <b>Luigi Laterza, SINLOC, NESOI Financial support (15')</b> <b>Evdoxia Eirini Lithoxoidou, CERTH, NESOI platform (15')</b>	SINLOC CERTH
<b>Part 9 – Objective: European networking, knowledge sharing</b>			
10:00	11:00	<b>European networking</b> <b>Sulev Alajõe, Estonian islands energy agency, Estonian roadmap for leaving behind diesel ferries (15')</b> <b>Ricardo Luis Guerrero Lemus, EnergyRIS, Setup of the First citizens' energy community In Canary Islands: Adeje (15')</b> <b>Cola Ivan Zokovic, Energy cooperative Novi Otok Korčula, A business zone powered by green hydrogen. (15')</b> <b>Bjarti Thomsen, Wind will replace oil in the Faroe Islands. (15')</b> <b>Q&amp;A</b>	R2M
11:00	12:00	Final debate – Slido based workshop	R2M
<b>NESOI guests organize lunch on their own, free time</b>			
15:00	17:30	Social activity hike	R2M
19:00	21:00	Participants meet for dinner (Optional) (before ferry departure in the evening or early flights on the next day)	
23:00	7:00 (+1)	Ferry from Kirkwall to Aberdeen 23h-7h	

## F-2. SST3 presentations

SST3 presentations available as e-learning material on the NESOI platform	
Carly Tait, EMEC Tidal Stream Industry Energiser project <u>NESOI Platform e-learning module category:</u> <b>Renewable Energy Sources</b>	
Catherine Tait, EMEC Wave Energy Demonstration at Utility Scale to Enable Arrays <u>NESOI Platform e-learning module category:</u> <b>Renewable Energy Sources</b>	



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SST3 presentations available as e-learning material on the NESOI platform	
<p>David Amos, PlusZero Project Z-175 - Green Orkney Hydrogen Market Expansion (GOH2ME)</p> <p><u>NESOI Platform e-learning module category:</u> <b>Hydrogen</b></p>	 <p>New Energy Solutions Optimised for Islands <b>NESOI</b> EUROPEAN ISLANDS FACILITY</p> <p>Project Z-175 - Green Orkney Hydrogen Market Expansion (GOH2ME)</p> <p>Project Lead: <b>PlusZero</b></p> <p>Local Project Partners: <b>EMEC</b>, <b>RINA</b>, <b>SINLOC</b>, <b>ARC</b></p> <p>Technical Advisors: <b>RINA</b>, <b>SINLOC</b></p> <p>Presentation: David Amos, Managing Director, PlusZero Ltd david@pluszero.co.uk, +44 771 891 5331</p>
<p>Eduard Escola, CREM MENORCA 2030. Roadmap to decarbonisation</p> <p><u>NESOI Platform e-learning module category:</u> <b>Energy Transition Plans</b></p>	 <p>New Energy Solutions Optimised for Islands <b>NESOI</b> EUROPEAN ISLANDS FACILITY</p> <p><b>MENORCA 2030. Roadmap to decarbonisation</b></p> <p>Eduard Escola Waste and Energy Consortium of Menorca</p> <p>Erasmus Short Study Tour - The Orkney Islands, 08/05/23</p>
<p>EMEC Introduction to EMEC</p> <p><u>NESOI Platform e-learning module category:</u> <b>Energy Transition Plans</b></p>	 <p><b>EMEC</b> THE EUROPEAN MARINE ENERGY CENTRE (EMEC)</p> <p><b>Introduction to EMEC</b> NESOI project visit</p> <p>Matt Storey, Leonore van Velzen, Naomi Wood</p> <p>May 2023</p>
<p>Laura Hutton, ICNZ Joining the dots on decarbonisation</p> <p><u>NESOI Platform e-learning module category:</u> <b>Energy Transition Plans</b></p>	 <p><b>ICNZ</b> Islands Centre for Net Zero</p> <p><b>Joining the dots on decarbonisation</b></p> <p>Laura Hutton ICNZ Project Director</p> <p>May 2023</p>



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SST3 presentations available as e-learning material on the NESOI platform	
<p>Melis Yilmaz, Troya Net zero Islands with Energy Communities</p> <p><u>NESOI Platform e-learning module category:</u> <b>Energy Transition Plans</b></p>	
<p>Nikolas S. Argyriou, Municipality of Alonissos Circular economy, recycling and waste management on the island of Alonissos.</p> <p><u>NESOI Platform e-learning module category:</u> <b>Energy Transition Plans</b></p>	
<p>Orkney Islands Council Orkney Islands Council Overview</p> <p><u>NESOI Platform e-learning module category:</u> <b>Energy Transition Plans</b></p>	
<p>Vasilos Chantziaras, NEPTUNUS Chalki Island: Waves of energy Waves of change</p> <p><u>NESOI Platform e-learning module category:</u> <b>Renewable Energy Sources</b></p>	



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SST3 presentations available as e-learning material on the NESOI platform	
<p>Alex Coronati, EDP H2 in Azores to enhance a green and RES-powered transition</p> <p><u>NESOI Platform e-learning module category:</u> <b>Hydrogen</b></p>	
<p>Fanis Christakopolus, DAFNI NESOI project Green Hydrogen Ecosystem on Kos Island</p> <p><u>NESOI Platform e-learning module category:</u> <b>Hydrogen</b></p>	
<p>Klaudia T. Tolstow, ROBINSON (Smart integration of renewable energy on industrial islands) and hydrogen</p> <p><u>NESOI Platform e-learning module category:</u> <b>Industrial Park</b></p>	
<p>Bjarti Thomsen, Wind will replace oil in the Faroe Islands</p> <p><u>NESOI Platform e-learning module category:</u> <b>Wind Energy</b></p>	



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SST3 presentations available as e-learning material on the NESOI platform	
<p>Cola Ivan, Zokovic Community-Supported Energy: A Step to Community SOLAR Islands</p> <p><u>NESOI Platform e-learning module category:</u> <b>Renewable Energy Sources</b></p>	
<p>Luigi Laterza, SINLOC Financial and technical support from the EU</p> <p><u>NESOI Platform e-learning module category:</u> <b>Investment Plan</b></p>	
<p>Ricardo Luis, EnergyRIS Setup of the First citizens' energy community In Canary Islands</p> <p><u>NESOI Platform e-learning module category:</u> <b>Energy Efficiency</b></p>	
<p>Sulev Alajõe_Estonian islands energy agency Estonian roadmap for leaving behind diesel ferries</p> <p><u>NESOI Platform e-learning module category:</u> <b>Wind Energy</b></p>	

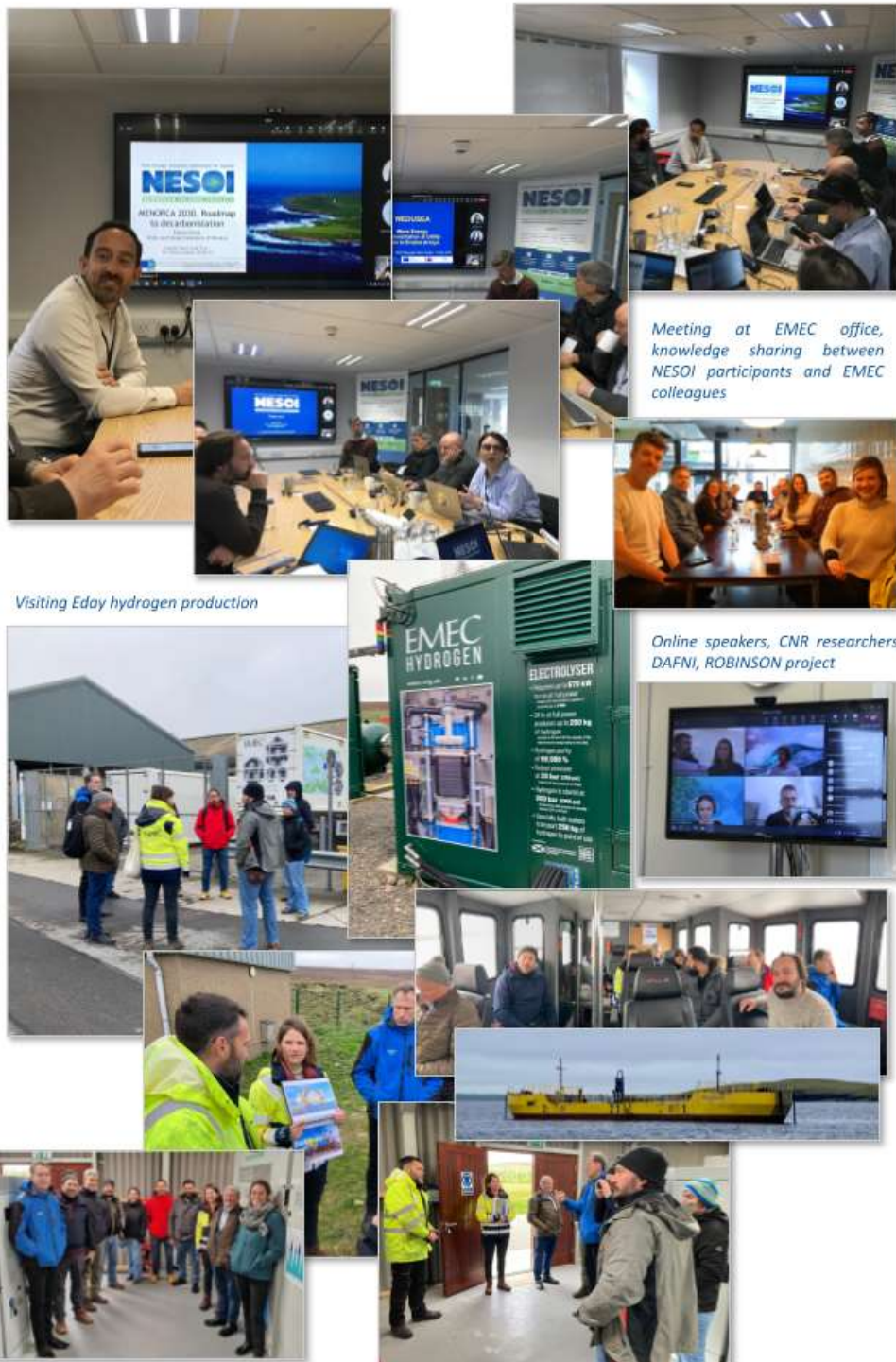


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F-3. SST3 pictures



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F-4. SST3 communications

**NESOI @nesoi\_energy · 12 May**  
 @nesoi\_energy SST3 #OrkneyIslands! 🌟  
 After a morning of discussion and sharing of expertise, our participants will join in a social activity hike before the SST3 also ends.  
 Read more about this initiative on @nesoi\_energy website: [ow.ly/ZWUA50kshkP](https://ow.ly/ZWUA50kshkP)  
 Follow us! 🌟

**NESOI @nesoi\_energy · 15 May**  
 The end of the SST3 in the #OrkneyIslands has come! 🌟  
 We want to thank our kind host, The European Marine Energy C @EMEC Ltd, who helped make this possible, and our applicant participation and interest.  
 Follow us and discover more: [ow.ly/ZWUA50NkNP](https://ow.ly/ZWUA50NkNP)

**NESOI @nesoi\_energy · 11 May**  
 @nesoi\_energy SST3 #OrkneyIslands! 11 day! 🌟  
 After the site visit, our participants are hosted by @EMEC Ltd to discuss the following objectives:  
 -Hydrogen and e-fuels  
 -Knowledge sharing about Hydrogen projects on islands  
 Read more: [ow.ly/ZWUA50kshkP](https://ow.ly/ZWUA50kshkP)

**NESOI @nesoi\_energy · 10 May**  
 @nesoi\_energy SST3 #OrkneyIslands! "first day!" 🌟  
 Today's discussion:  
 -The Orkney Islands energy landscape  
 -Island decarbonisation  
 -Knowledge sharing about Marine Renewable Energy  
 -Discover EMEC facilities at Stromness  
 Read more at [ow.ly/ZWUA50NkNP](https://ow.ly/ZWUA50NkNP)

**NESOI @nesoi\_energy · 3 May**  
 NESOI Study Tours time! From the 9- 12 May, the #OrkneyIslands will host our participants from all over Europe to share knowledge and best practices on #MarineRenewableEnergy and #GreenHydrogen!  
 Stay tuned! 🌟  
[ow.ly/BWVR50O9Vfn](https://ow.ly/BWVR50O9Vfn)

**NESOI @nesoi\_energy · 5 May**  
 Few days left to #OrkneyIslands! The major goals of this tour are to assist possible NESOI technique replications and to encourage the island's actors to share their knowledge with project beneficiaries and the community.  
 Follow us for more!  
[ow.ly/2kN503Vvix](https://ow.ly/2kN503Vvix)

**NESOI @nesoi\_energy · 10 May**  
 @nesoi\_energy SST3 in the Orkney Islands! The BIG day has finally arrived! 🌟  
 Let yourself be inspired by the #OrkneyIslands' incredible atmosphere, the proposed interesting sessions, and the special guests who will accompany our tour!  
 Follow us and discover what's next! 🌟

**NESOI @nesoi\_energy · 12 May**  
 @nesoi\_energy SST3 🌟  
 The third day has started at the @EMEC Ltd, Stromness, where the last objectives of this incredible adventure in the #OrkneyIslands will be discussed.  
 -#EMECbyEMEC  
 -#EuropeanPrototyping\_#knowledge\_sharing  
 Read more at [ow.ly/ZWUA50kshkP](https://ow.ly/ZWUA50kshkP)

**NESOI @nesoi\_energy · 10 May**  
 @nesoi\_energy SST3 #OrkneyIslands! "second day!" 🌟  
 Today's discussion:  
 -The #electrolyser and  
 Read more at [ow.ly/ZWUA50kshkP](https://ow.ly/ZWUA50kshkP)  
 @EMEC



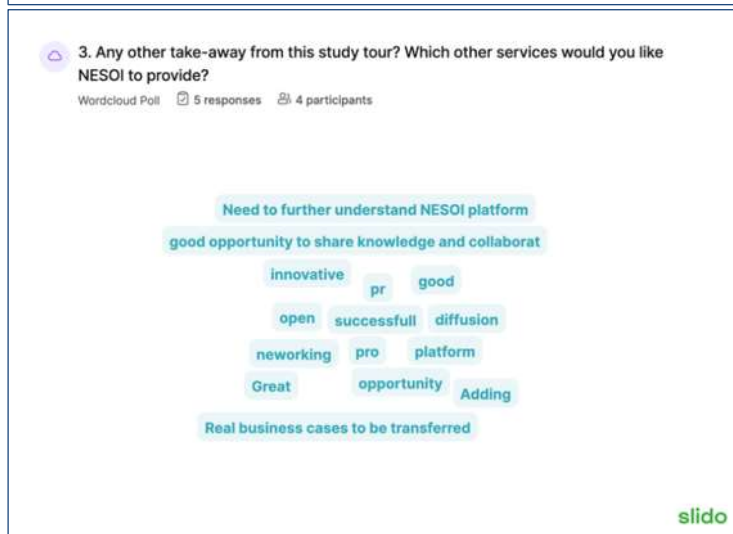
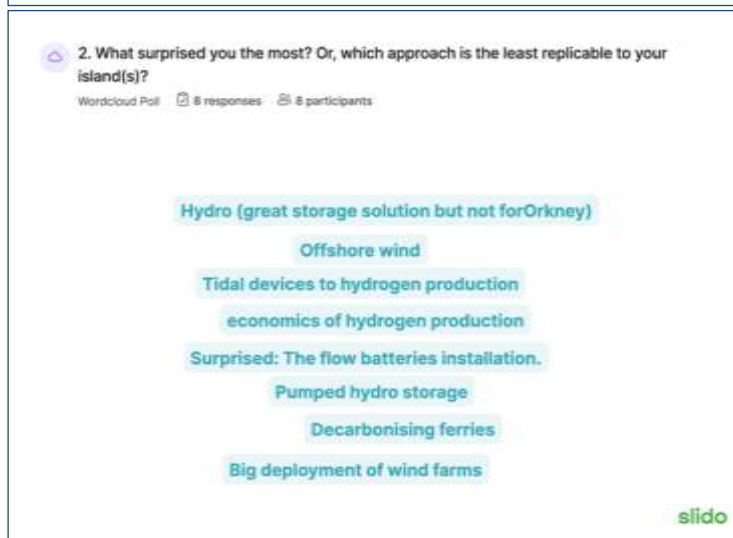
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F-5. SST3 workshop outcomes



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## D7.6: Report from islands staff coaching (first part)

## F-6. SST3 takeaways and participant feedback

*What are your main takeaways from the study tour?  
(e.g. main learning points, main surprises...)*

Orkney's path in the framework of HySeas projects has shown many learning points for reaching the hydrogen-powered ferry, hopefully not stopped because of recent setbacks.

Main learning points: Marine energy applications, process of hydrogen production. H2 production is real. Good to see marine energy working.

Main surprises: Energy transition to RES is feasible in small islands like Alonissos. Living in an islands makes you feel that you have many issues that are only local issues. With this kind of meetings we can realize that many of those issues are quite similar in very different places.

Marine energy applications have an increasing importance for improving the renewable energy supply and climate policy targets, especially on remote island areas. Storage matters have become natural part of islands' energy system planning and deploying. Hydrogen is not any more just a curtailed wind energy carrier, but the source for decarbonizing the transport and producing methanol and ammonia as new sources for islandic economic development.

The process of hydrogen production, safety obstacles around the production and transportation of hydrogen, site visit, the possibility to find out what all the other islands are doing in terms of energy transition

*Amongst the different aspects discussed, which one is the most likely to have an impact on your future activities and why?*

The hydrogen production on Eday island and its distribution to Kirkwall has shown the challenges we would like to consider on our hydrogen-related market way forward.

Looking at the solutions in front of the problems we all have in islands in terms of weak cables to mainland, or other problems that send us to curtailments in renewable generation. We must think on hydrogen, in battery storage, using heat pumps as energy storage, and any other consumption we can move to the moments we have excess of energy.

Economic profitability and commercialization of hydrogen production. spreading energy communities in other locations

Tidal energy. Alonissos is a Natura 2000 member thus Wind Energy is out of picture.



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*What concrete impact could have the new contacts made possible during the SST3?*

Creation of new consortia to apply for calls for projects

When you have a problem, in this case regarding to energy, the best way to solve it is to ask the person that had it before you.

New networks may prove useful in technical assistance and could provide examples of good practices. Hope hydrogen ferries commissioning goes forward within the open dialogue between Orkney and Estonian archipelagos.

Faroe Islands' wind and pump-hydro solution is noteworthy. Orkney's use of flow batteries to stabilize electrolysis energy supply is unique and warrants further examination for adoption.

*Additional comments you would like to share with us:*

A perfect combination of presentations, discussions, site visitings, and social interactions! For future schedules, I'd recommend starting with participants presentations (rather than leaving them for the final session) to ease the cooperation setup between similar goal people/organizations.

thank you so much for a great experience!

Great organisation and great colleagues in this meeting.

Great hosts from EMEC. I've been in many similar forums, and for me it has been the best organised and the most usefull. It's a great idea to put together many people with similar issues and from so many different places. The size of the group is big enough so we all can hear different points of view or many different experiences, but at the same time small enough so we can get in touch with all the members of the group.

all better than expected.

Excellent study tour overall!  
My sincere thanks for everything!

*Average level of satisfaction regarding the organisation of the SST3*

**4.8/5**

*Average level of satisfaction regarding the technical programme of the SST3*

**5/5**



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