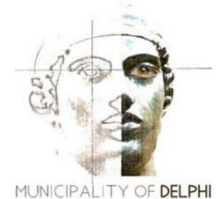


# SMART solutions for HYdrogen potential AWARe ness Enhancing

## NEWSLETTER 2. SEPTEMBER 2020

**SMART-HY-AWARE** aims to promote hydrogen-electric mobility by tackling the main infrastructural, technological (range anxiety related) and market uptake barriers, through the improvement of Policy Instruments linked to Structural Funds in Europe, addressing the **transition to a low carbon economy**. Specific sub-objectives of the project are:

- Exploiting the potential of hydrogen technologies for electro-mobility, involving the whole supply chain;
- Improving regional and local strategies which focus on the real needs for implementation, such as promoting the integration of new models of fuel cells;
- Increasing the efficiency of green propulsion in transport;
- Improving renewable energy grids to cut down electrolysis costs, and IT management applications to enable advanced planning of short-to-mid-term power productions, thus fostering the use of hydrogen power within distributed networks;
- Increasing the deployment and the accessibility to refuelling infrastructure for both public and private sector in urban and rural areas;
- Supporting the deployment of alternative fuel vehicles in public transport by setting up regional financial support schemes;
- Promoting and assessing new measures favouring public-private partnership (PPP) in e-mobility sector;
- Enhancing the capability of public Authorities in developing effective policies for reducing the carbon footprint of transport activities.





## SMART HY AWARE DURING THE COVID-19 CRISIS

The second semester of Smart Hy Aware has been highly influenced by the COVID-19 crisis and the consequent measures which needed to be adopted. Due to this, travelling was not allowed and all of us had to adapt both ourselves and project activities to working from home.

The second IRSV, which was foreseen to take place in the Province of South Holland, was postponed to the third semester, if travelling is allowed and safe. On the other hand, the second IRW was hosted online, with the participation of project partners and regional stakeholders.

One key activity that has been completed in this semester is the Setting the Scenes report; After a deep analysis carried out by each partner, a document which compiles the current situation of all regions regarding hydrogen technologies development and electromobility was elaborated. During the coming semesters the consortium will work together on it with the purpose of finding synergies among us and facilitating the learning process.

Finally, the second steering committee meeting also took place online.

## IRW2 – ONLINE

The second IRW took place online on the 18th June, under the topic “discuss ways of inter-institutional cooperation to foster energy production from hydrogen, identify good practices and getting feedbacks from inter-regional stakeholders on transferability factors”.

Due to the COVID-19 situation and the impossibility to travel, the consortium decided to organize the second IRW online. After a brainstorming exercise, the methodology of this workshop was decided. It consisted of recording some videos in which regional stakeholders talk about their expertise on the topic. All the videos were uploaded to the Youtube channel of the project, and are visible there. Apart from that, the lead partner also recorded some educational videos regarding good practices and their transferability.



After uploading the videos, each partner had some days to watch and analyse them with their regional stakeholders, and then an online meeting and discussion among partners and stakeholders was organized. In this meeting, each region (partner and stakeholders) had a timeslot to comment on what they are more interested about other partner's videos, explain their good practices and expertise and make the contributions they wanted. An open discussion closed the workshop.

The screenshot shows a Zoom meeting window. The main content is a presentation slide titled "The first steps towards hydrogen mobility". The slide text reads: "Hydrogen is an energy carrier that offers many possibilities for reducing emissions in transport sector in the short-medium term. Fuel cell vehicles combine hydrogen and oxygen to produce electricity, ensuring charging times and autonomies similar to traditional internal combustion vehicles." Below this, it lists "HYDROGEN mobility initiatives in Italy":

- Partnership agreement signed with Toyota that will provide 10 fuel cell cars in the San Donato Milanese area and 10 in the Metropolitan City of Venice where the construction of two new fueling stations is expected to supply hydrogen at 700 bar:
  - San Donato Milanese Area
  - Venice Area
- Agreement with the City of Venice to evaluate the development of an integrated sustainable and experimental hydrogen mobility platform

The slide also features a section titled "CURRENT EVALUATIONS FOR THE CREATION OF A PLASMIX HYDROGEN PRODUCTION PLANT" with a diagram showing the process: PLASMIX (from High Temperature Plastic) → HYDROGEN. A partnership note mentions an agreement with Veritas, a multiutility environmental services company of Venice, for the study of a production plant. The Zoom interface includes a toolbar with a "Solicitar control" button and a video gallery at the bottom showing participants like Scheeders, M., Lorenzo Jesus Gracia, jerespo (Invitado), Ferdinando Rossi, and Gargiulo Luigi. The system tray at the bottom shows the time as 10:17 on 18/06/2020.

The workshop proved to be very useful to keep stakeholders involved in the learning process and to start sharing experiences among the consortium. Given the current circumstances, all the consortium was very satisfied with the results and know more about the situation in other regions.

## REGIONAL STAKEHOLDER WORKSHOPS

### ARAGON

On July 21st the second Regional Stakeholder Workshop took place in online. 9 stakeholders representing a number of public and private institutions (foundations, clusters, companies...) from the region attended the meeting.

#### Actividades S1 y S2

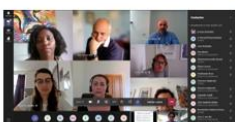
Kick-off meeting + IRSV1



9 reuniones socios – agentes de interés



2 workshop interregionales



Youtube channel

Setting the scene report



The lead partner of Smart Hy Aware gave a brief presentation of Interreg Europe Programme, and also of the project and its objectives, focusing on the policy instrument that concerns the region. The activities that have been developed during the first year of the project were also briefly explained. The lead partner highlighted the importance of counting on the stakeholders during all the stages of development of the project, due to the fact that they are going to be one of the main beneficiaries of the improvement of the policy. That is why they play a key role providing their expertise on the field.

After that introduction, the Aragon Hydrogen Foundation, which have a lot of expertise in the field, explained that the use of hydrogen is currently a priority among the european and national strategic objectives to achieve a more sustainable society. Therefore, we must take advantage of this favourable context to develop and promote the use of hydrogen in mobility.

The second part of the meeting consisted of an open discussion about how to promote public-private collaboration in pilot projects of sustainable mobility within the framework of hydrogen. Stakeholders had the time to make their contributions and ask questions. These were some of the most interesting statements:

- Need of giving diffusion of the existing hydrogen technologies among both the industrial actors and the general population, to create public awareness and acceptance.
- Be aware of all the process of hydrogen technologies development, from its cost-efficient production to the stimulation of industry demand.
- Need of reducing costs and to adapt and create the adequate infrastructure to solve the current distribution problems.
- The possibilities of hydrogen technologies in mobility and also in other applications such as energy storage have already been demonstrated.
- Representatives of the logistics sector stated the importance of hydrogen fuel-cells' efficiency. One of its main advantages is their storage capacity, very important in the sector. They want to increase the use of green hydrogen in the sector.
- Hydrogen and batteries should both be in the market – they are not selective. Apart from mobility, it is important to exploit other niches where hydrogen could be useful, such us remote areas, protected areas, aviation, trains...
- The production of components for the automotive sector should also be a market niche in which green hydrogen technologies should be implemented when we tend to achieve a more sustainable mobility.



## LAZIO REGION

During this semester, Lazio Region has organized two virtual RSW. The first one was held on the 19th of March (23 attendants), and the second one consisted of bilateral meetings with several stakeholders.

### RSW1

This virtual meeting was the first official contact among Lazio region's partner and their stakeholders to talk about Smart Hy Aware and set the basis for future cooperation. Firstly, a general presentation about the Interreg Europe Programme and Smart Hy Aware objectives, consortium, activities and expected results took place, highlighting the essential paper of stakeholders during the whole life of the project.



After that, a brief presentation of the state of the use of hydrogen technologies in mobility at a regional level from a national perspective, in the framework of the Integrated National Plan for Energy and Climate (PNIEC) was shown. The National Plan identifies specific objectives with reference to the use of fuels from renewable sources, such as the gradual replacement of the car fleet and public transport vehicles on the road with green vehicles, and transport decarbonisation in general.

Finally, an introduction to regional policies aimed at reducing polluting emissions, improving air quality and energy efficiency, in particular through sustainable mobility in urban and metropolitan areas was given.

The end of the workshop consisted in the contribution of the attendees, who shared its experience and ideas with the project partner. Some of the main conclusions were the necessity to work to promote the use of hydrogen in regional mobility plans and to adapt the infrastructure to make it available for citizens. To make this possible, it is necessary that the use of hydrogen vehicles was widespread, because otherwise public service stations would not be viable.

### RSW2

Due to Covid-19 crisis, Lazio region held numerous bilateral meetings with their stakeholders during the second semester. Particularly, stakeholders greatly cooperated with Lazio Region for the publication of some concerned videos (on the subject of governance, best practices, national and regional state of the art...) for the IRW2. Several meetings were held in order to coordinate the activities and the contents of the videos.

Furthermore, some other bilateral meetings have been held in order to discuss what kind of cooperation could be developed in the framework of the project implementation activities. In particular, in July discussions started with ENI (the Italian National Energy company) and with ENEA (the National Agency for New Technologies, Energy and Sustainable Economic Development) and they are still ongoing, with promising opportunity to be developed together.



## MUNICIPALITY OF DELPHI

On July 14th the second virtual Regional Stakeholder Workshop was celebrated with 10 attendees, including representatives of the regional Government of Sterea Ellada and the Municipality of Delphi, the Hellenic Institute of Transport, the local Chamber of Commerce and Industry, regional Technical Chamber, and also other cooperatives.

After welcoming the participants, Delphi partner presented the setting the scene report to his stakeholders, which is a report that presents the process of the project in each individual country in a six months period, so that they could have an idea about other partner's objectives. Afterwards, the participants had the time to make questions about the other stakeholder's good actions and practices. Consequently, it was discussed the good practices and the future plans of the Municipality :

- Improving regional and local strategies by creating measures to increase the use of hydrogen.
- Improving the efficiency of transport by using “environmentally friendly vehicles”.
- Strengthening the capacity of public authorities to create public transport policies with a small carbon footprint.
- Enhancing the development and accessibility of hydrogen supply infrastructure in urban and rural areas through the private and public sectors.

Following this, the Hellenic Institute of Transport (HIT) presented the transition towards a low-carbon mobility using hydrogen. They explained what hydrogen is from a technical point of view and their possibilities, advantages and potential in transport. They also explained the method of producing hydrogen from renewable sources.

**RESULTS OF HYDROGEN USE**

- Significant benefits for the energy system, the environment and the global economy.
- Reduce annual CO<sub>2</sub> emissions.
- Eliminate local emissions.
- Reduce noise pollution in cities.
- Could create opportunities for sustainable economic growth.
- Achieve a deep decarbonization of all transport segments.

The meeting ended with a common discussion and open debate among all the attendees.



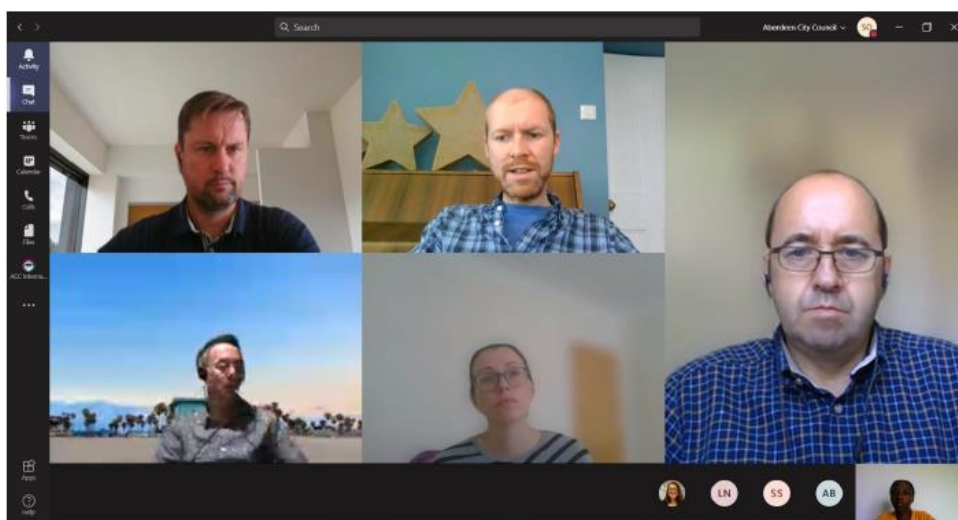
## ABERDEEN CITY COUNCIL

During this semester, ACC held virtual meetings with a total of 12 organizations: Police Scotland (20 March), Aberdeenshire Council (25 March), Angus Council (9 April), Highland Council (9 April), Nature Scot (15 April), Robert Gordon University (22 April), University of Aberdeen (1 May), Scottish Water (4 May), Scottish Environment Protection Agency (15 May), Royal Mail (18 May), North East Scotland College (29 May) and NHS Grampian (29 May).

These meetings were targeted towards increasing awareness of the new hydrogen strategy approach and use of hydrogen technologies for transport. They also offered the opportunity to exchange information on the SHA project. Discussions with the stakeholders centred around the key benefits and achievements of hydrogen in the Aberdeen city-region and what they hope to achieve through the hydrogen hub. All organisations were offered the opportunity to be involved in a partnership under the Smart HyAware umbrella to undertake a joint hydrogen demand fleet review in order to encourage hydrogen vehicle uptake. The fleet review will assess which of the organisation's vehicles can be converted to hydrogen over the next 5 years.

Before covid-19 (20 February), ACC attended the Innovation in Scotland's Energy Storage Industry Conference at the Michelin Tyre Centre in Dundee, where they shared Aberdeen's hydrogen experience through networking with various stakeholders working within the hydrogen and fuel cell industry. This conference facilitated knowledge-sharing between different sectors and highlighted the potential of hydrogen and fuel cells in transport.

They also gave a presentation to 14-year old students at St Machar Academy on 2 March 2020 on hydrogen technology and the vast possibility of its uses such as transport, heating... They also presented to them some hydrogen projects in which ACC is involved, and offered them the opportunity to explore a hydrogen Toyota Mirai.



Aberdeen City Council has also hosted virtual meetings via Microsoft Teams with Scottish Enterprise (Scotland's national economic development agency) and Opportunity North East (ONE – responsible for developing Aberdeen City Region economic activities after the oil and gas industry downturn) on a fortnightly basis since February 2020.

Discussions have been centred around developing Aberdeen as a “hydrogen hub” and preparing a business case to secure Scottish Government funding towards a hydrogen energy transition. The new Aberdeen Hydrogen Strategy will be based on the delivery of the Hydrogen Hub.



## PANNON BUSINESS NETWORK

The second RSW in Hungary was aligned with the kick off meeting of the Hungarian Hydrogen Technology Platform. It took place online on the 27th of April, with 11 attendees. Among them, prestigious experts and policy makers such as representatives from the Hungarian Ministry for Innovation and Technology, the leader of Valor Hungariae Zrt. (national institution in charge of innovations), researchers from a national research institution, an international award-winner mechanic engineer, as well as a representative from Hungarian Hydrogen and Fuel Cell Association.



The overall objectives of the National Hydrogen Technology Platform are to enhance the implementation of hydrogen-related innovative technologies in Hungary. Members of the Platform advocate the exploitation of hydrogen technologies taking into account its economic benefits and environment protection aspect. The activities which shall be carried out by the Platform might contribute to positive policy change towards hydrogen usage on a national level. Besides, the identification of focus areas

concentrating on SME sector, the establishment of international network on hydrogen topic as well as the participation of hydrogen related R&D projects on an EU level have been also defined as overarching goals of the Platform.

During the meeting, the representative of PBN shared the topic and the main objectives of the Smart-HY-Aware project with the participants. Following that, the representative of Hungarian Hydrogen and Fuel Cell Association shared the main conclusions of a feasibility study which he - together with another expert - prepared and finalised in the middle of April, in the framework of the Smart-Hy-Aware project. In this study, the external experts described what kind of hydrogen solutions might be implemented in the region, taking into consideration the financial aspects as well as the current national and EU policies in this topic.

From the side of the attendees, appreciation was given towards project activities, and they expressed their support in the envisaged task as well. All the participants agreed that hydrogen usage will play an important role in the future, therefore, the advocacy of hydrogen usage on a national level is essential.





## UPCOMING EVENTS

For the third semester, it was foreseen to organize the IRSV3 in Rome and the postponed IRSV2 in South Holland. However, the current global situation due to COVID-19 crisis will not allow to travel abroad, so the consortium decided to organize a virtual IRSV3 instead. Our partner from Lazio region is currently working on it, and the event will probably take place during the month of November. Regarding other project activities, RSWs will probably continue taking place online, and all partners expect to start working on their regional action plans during this semester.

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