



SO-FREE
Solid oxide fuel cell combined heat and power: Future-ready Energy
 Grant Agreement 101006667
 January 2021- September 2024 (44 months)

Meeting Minutes

Meeting Title	Kick of Meeting
Date/month	January 21-22, 2021/M1
Location	On line

Present

Stephen McPhail	ENEA	Michal Wierzbicki	IEN
Massimiliano Della Pietra	ENEA	Marek Skrzypkiewicz	IEN
Andrea Monforti Ferrario	ENEA	Giulia Botta	KIWA
Davide Pumiglia	ENEA	Hans Driessen	KIWA
Francesca Santoni	ENEA	Edmund Fennema	KIWA
Thomas Hirschberger	AVL	Philip Brain	KIWA UK
Bernd Reiter	AVL	Anna Wlodarczyk	PGE
Matti Noponen	Elcogen Oy	Katarzyna Kopec	PGE
Hanna Granö-Fabritius	Elcogen Oy	Lukasz Bubniak	PGE
Stefan Megel	Fraunhofer IKTS	Bartosz Cieslak	PGE
Jens Schnetter	Fraunhofer IKTS	Luca Del Zotto	Uni Marconi
Carlo Tregambe	ICI Caldaie	Sara Cella	Uni Marconi
Jakub Kupecki	IEN	Enrico Bocci	Uni Marconi
Konrad Motylinski	IEN	Dionisis Tsimis	FCH JU
Magdalena Kosiorek	IEN	Loan Nguyen	FCH JU

Thursday 21st January 2021

9.30-9.45	Welcome, opening, roundtable and approval of agenda	Coordinator
9.45-10.30	Partners presentation (5 min each)	All
Each partner gave a brief presentation of their company/institution with their role in the project		Action: None
10.30-11.00	Rules and financial aspects FCH-JU	D. Tsimis, Project Officer L. Nguyen Financial Officer
The project officer for this project, Dionisis Tsimis, illustrated the rules of the Grant Agreement and the relations with the FCH JU, including financing, reviews and data collection. The first Review of the project (M1-18) will be scheduled in September 2022. The financial officer Loan Nguyen explained the rules for financial reporting. A Financial workshop will be held in April/May 2021 to go into further details of Partners' financial reporting, caveats and best practices.		Action: Nguyen to notify project Coordinator of the dates of the Financial Workshop to invite Partners
11.00-11.40	Technical Overview and management (WP1)	ENEA
Grant Agreement: status and key information		
Consortium Agreement: status and signatures		

		Pre-financing: updates Objectives, project structure, work plan of the project	
<p>The project Coordinator, Stephen McPhail, gave an overview of the project in terms of targets, tasks, responsibilities, timing and approaches. Milestones and Deliverables were listed and the compulsory citation of FCH JU support in all communication was pointed out.</p> <p>Prefinancing has been received: when all Bank account details are in, ENEA will proceed with the distribution of the first pay-out according to Consortium Agreement rules.</p> <p>The Consortium Agreement has been finalised and requires the signature of the different Parties.</p>			<p>Action: ALL Partners to communicate Bank details and sign Consortium Agreement in 2 originals (signature pages only) to be sent to ENEA.</p>
Coffee break			
12.00-13.00	WP2 System-ready stacks: Objectives, programming, infrastructures, approach		IKTS
14.30-16.00	WP2 Breakout session to define imminent Tasks and Deliveries		ENEA- IKTS-ELC-IEN
<p>IKTS presented the objectives and tasks for WP2, highlighting the tight schedule to deliver the required experimental validation and performance mapping of the ELC and IKTS (short) stacks, converge on a common stack module-system interface before producing the stacks that will go into the 2 systems (WP3) for demonstration (WP4).</p> <p>IEN will deliver 2 identical test environments (furnace, preheater system, humidifier) developed in house, 1 for test in IEN the other for tests at ENEA to achieve comparable test results.</p> <p>IKTS and ELC will deliver short stacks (nr of cells TBD) to either testing facility for cross validation. It is agreed to deliver stacks with integrated baseplate to avoid sealing issues on site, as well as piping that allows to place the fittings in the cold area of the test rigs.</p> <p>IKTS will provide ENEA with a short stack specifically adapted for localised gas/temperature sampling across the bottom cell of the short stack. ENEA's allowable geometry and available reactant supply equipment will probably be the restricting factors in the selection of stack cells and furnace dimensions.</p> <p>In deciding on the experimental campaign, discussions with the system integrators are called for to identify net compositions at stack entry, given specific recirculation approaches and selected fuel compositions (6 compositions as given in the proposal). A starting point could be the conditions defined in the DE-AT project SOFC560.</p>			<p>Action: ENEA to circulate excel table with test environment specifications and limitations for integration by IEN, IKTS and ELC of resulting test items, conditions and expected performance</p> <p>Action: IKTS to call for a meeting with system integrators on system-stack interfaces</p> <p>Action: IEN needs definitive specifications by February 12th for design and construction of test rigs and delivery on time.</p>
13.00	<i>Wrap-up day 1 and closure</i>		

Friday 22st January 2021

9.30-10.30	WP3 Stack-ready systems: Objectives, programming, infrastructures, approach		AVL
<p>AVL presented the objectives and tasks for WP3, in particular for the development process at AVL. Starting point will be the "FIRST" system, a 5 kWe CHP Platform designed for fuel switching between H2 and NG. Up to 20% H2 probably there will only be a need for recalibration and software updates. For larger admixture or different compositions there may be parts that need to be changed.</p> <p>Recirculation solutions and stack module interfaces will be developed with stack providers. ICI Caldaie confirms that the schedule presented by AVL corresponds to theirs and agrees to interact for an alignment of the design phases.</p> <p>First proposal for a common stack module-system interface should be ready by M12</p>			<p>Action: AVL and ICI to discuss with IKTS and ELC on alignment of stack module-system interface. (see also action in WP2)</p>
10.30-11.30	WP4 System pre-certification, demonstration, and economic		KIWA

	assessment: Objectives, programming, infrastructures, approach	
	<p>KIWA presented the objectives and tasks of WP4, highlighting the processes related to pre-certification at KIWA. The requirements related to system design will be shared with AVL and ICI; but the long-term testing at their premises will be carried out on the AVL system only.</p> <p>IEN presented the identified location for the demo-testing of the second system (ICI), which is a residential site within the IEN premises adequately equipped for the required monitoring yet guaranteeing TRL7 demonstration. This implies that a transfer of responsibilities and funds will take place from PGE (originally responsible for site selection of the second demo) to IEN. This has already been specified in the Consortium Agreement. An amendment procedure to the Grant Agreement will be initiated in due course to formalise this at contract level.</p> <p>Technical-economic analysis will be carried out with market focus for Italy, Netherlands, Poland and UK according to approaches that will be shared by KIWA.</p> <p>A Lifecycle sustainability assessment will be carried out on the systems developed. For this to be comprehensive and fully valid, a material inventory as well as operational performance will be required for accurate modelling of the complete lifecycle impacts. Industrial partners should collaborate in providing this data in due course.</p>	Action: Coordinator to engage with project Officer to discuss the Amendment process in due time.
	Coffee Break	
12:00-12:45	WP5 Dissemination, communication, standardisation and exploitation: Objectives, programming, infrastructures, approach	USGM
	<p>USGM presented the objectives and tasks in WP5 on dissemination, communication and exploitation. Website and templates will be prepared soon. Several options for the project Logo were presented and discussed, leading to suggestions for improvement to be considered by USGM. The logo will govern the image of the project website and templates. A work space is necessary for sharing relevant documentation between partners. USGM agreed to organise it, but ultimately ENEA will set up a space in Google Drive (no issues were raised on this tool).</p> <p>ENEA presented the Task related to relationship with the External Advisors (Stakeholders that manifested support to the proposal), requiring the contact details for those companies suggested by Partners PGE (with IEN) and KIWA.</p> <p>ENEA also illustrated the pathway to a possible standardisation of the stack module.- system interface through the IEC TC105.</p>	Action: USGM to provide further alternatives for project logo Action: PGE and KIWA to provide stakeholder contact details for invitation to the External Advisory Board Action: ENEA to set up a Google Drive workspace for the project partners
12.45-13.00	Nomination of PMC Wrap-up and next steps	All
	Nomination of the Project Management Committee (PMC): Stephen McPhail (ENEA), Richard Schauerl (AVL), Hanna Granö-Fabritius (ELC), Stefan Megel (IKTS), Carlo Tregambe (ICI), Jakub Kupecki (IEN), Giulia Botta (KIWA), Lukasz Bubniak (PGE), Luca Del Zotto (USGM)	
13.00	Close of meeting	