



The International Flow Battery Forum 2022

Time	Tuesday 28 th June	Name	Affiliation	Page number
08:00	Check-in opens & refreshments served			
09:00	Session 1 – Introduction to the IFBF and FBE		Moderator: Adam Clarke	
09:00	IFBF 2022	Anthony Price	IFBF and Flow Batteries Europe	
	Flow batteries at the heart of Europe: The role of trade associations in developing the flow battery industry	Kees van de Kerk, Eglė Karečkaitė, Patrick Clerens	FBE President FBE, Clerens	7
09:30	Session 1A – Security of energy supply and flow batteries			
	Response to the keynote address: The development of flow battery markets in USA	Mark Smith	US Vanadium	
	The case for flow batteries to support the energy system	Thomas Lüth	Voith	
	Key policy issues for renewable generation and storage in energy markets	Jennifer Condron	Wind Energy Ireland	
	Keynote address: The security of energy supply in Europe	Karlis Goldstein,	DG Energy	
10:45	REFRESHMENTS			
11:25	Session 2 – Recent progress in the flow battery industry –			
11:30	Flow battery projects in the EU and Worldwide Grid scale deployments in California and Japan Larges scale flow batteries in England and Scotland Lessons learned from the demonstration and operation of FB in South Korea Home flow battery systems	Alexander Schönfeldt Toshikazu Shibata Jean Louis Cols Jeehyang Huh Johannes Häntzschel	Cellcube Sumitomo Electric Invinity H2 Inc Kermi	76 26 46
12:40	Session 2A Markets, sustainability and environmental benefits			
	Identifying market opportunities for flow batteries Market predictions for the supply of vanadium The role of flow batteries in carbon neutrality Life Cycle Analysis (LCA) and CO2 Emissions Environmental modelling of MW scale VFB up to 2050	Mikhail Nikomarov Terry Perles Jim Stover Magdalena Neidhart Nick Blume	Bushveld US Vanadium VRB Energy CellCube ICEPE	40 64 80 20
13:30	LUNCH			
14:30	Session 3 – The Road to the flow battery giga factory			
	Perspectives from a venture capital company Why do we need a flow battery gigafactory? How do we achieve more scale in the flow battery industry?	Kara Rodby Stephen Prince Alan Greenshields	Volta Largo Clean Energy ESS	36
	Customer perspective Electrolyte financing Investors EU support schemes: Horizon Europe, Innovation Fund	Tim Rose Paul Vollant Andrew Monks Thomas Otuszewski	Pivot Power / EDF Renewables Largo VSA Capital Clerens	
16:35	Poster Speed Pitches		Maximum 15 speakers of 1 minute each	
16:55	Poster Networking session (includes refreshments)			
19:30	Conference Dinner: Separate registration required, ticket holders only			

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08:00	Refreshments served.			
09:00	Session 4 – Vanadium systems			
	Dimensioning, control and placement of storage in the grid - an approach for VFB	Christina Schubert	Landshut University of Applied Sciences	
	In situ and in operando detection of redox reactions	Torben Lemmermann	ICEPE	54
	Comparison study of VFB from different manufacturers	Yifeng Li, Thomas Lüth	Voith	58
	Benchmarking flow cell performance	Adam Whitehead	Invinity	84
	Tubular designs for vanadium systems	Thorsten Struckmann	Hamburg University of Applied Sciences	82
	Increasing efficiency of a VFB using combined heat and power	Christian Kupper	KIT, F-ICT	
10:30	Refreshments			
11:20	Session 5 – other flow battery systems			
	Hydrogen X Flow batteries	Johannes Hugo	Elestor	44
	Iron chromium flow batteries in off-grid applications in South Africa	Nico Mans	North West University, South Africa	60
	An electrically rechargeable zinc air flow battery	Sascha Genthe	TU Clausthal	32
	High energy density zinc / polyiodide flow batteries	Lukas Siefert	University Duisberg-Essen	78
	Demonstration of Fe-Cr flow battery	Liyu Li	Cougar Creek	56
	Low cost process for Fe-Cr electrolytes	Peter Chennells	Arxo Metals	24
12:30	Lunch			
13:30	Session 6 – Organic systems			
	Recent progress in organic based aqueous flow batteries	Eric Fell	Harvard	28
	POM based sustainable electrolytes	Angela Barros	Tekniker	16
	Co-axial micro tubular flow cell	Nian Liu	Georgia Inst Tech	90
	Session 6A – Other applications			
	Flow batteries in the maritime sector	Chris Price	Swanbarton	70
	Flow battery hibernation - longer discharge deferral	Steven Hickey	Redflow	38
	European Innovation Council funding for long-duration energy storage technologies	Francesco Matteucci & Antonio (Marco) Pantaleo	European Innovation Council)	
15:00	Refreshments			
15:20	Session 7 – Manufacturing and production challenges and standards			
	Sealants, adhesives and coatings in flow battery manufacturing	Andreas Arlt	WEVO Chemie	14
	Differential pressure-induced membrane deformations in flow batteries	Jan Girschik	Fraunhofer UMSICHT	34
	Failure modes, hazardous conditions and operational experience of flow batteries	Lakshmi Srinivasan	EPRI	
	Update on standardisation activities for flow batteries	Jens Noack	Fraunhofer ICT	
	IEEE standardisation work	Thomas Lüth	Voith	
16:45	Closing comments and discussion	Anthony Price	IFBF	
17:00	End of conference			