

# **4<sup>th</sup> IPHE Workshop - Stationary Fuel Cells**

**1<sup>st</sup> March 2011  
TOKYO INTERNATIONAL FORUM  
Tokyo, Japan**



**International Partnership  
for Hydrogen and Fuel Cells  
in the Economy**

**Organized by  
Ministry of Economy Trade and Industry (METI), Japan  
International Partnership for Hydrogen and Fuel Cells in the Economy  
(IPHE)  
New Energy and Industrial Technology Development Organization  
(NEDO)  
Technova**

**OBJECTIVES**

This workshop will invite government agencies, private companies and research organizations from key countries to present government policy and industrial activity in the area of stationary FC. The information disseminated through the workshop helps individual countries to learn from programs and activities in other countries, and promotes commercialization of stationary FC in the future. The workshop will contribute to policy making and business strategy development toward the commercialization of stationary FC.

**PROGRAM**

**Registration: 9:00 – 9:40 (room open at 9:00)**

<b>Opening Session 9:40 – 10:00</b>	
<b>Room G602</b>	
<b>Moderator: Haruhisa Koguchi, METI</b>	
<b>9:40 – 9:50</b>	Opening Remarks by METI <b>Kenta Iida</b> , Director, Hydrogen and Fuel Cell Promotion Office
<b>9:50 – 10:00</b>	IPHE Remarks <b>Kai Klinder</b> , Managing Director, NOW GmbH
<b>10:00 – 10:05</b>	<b>Break</b>

<b>Government Session 10:05 – 12:00</b>	
<b>Room G602</b>	
<p>This session will focus on governmental programs and their main stationary technologies / application areas. The speakers will provide a short overview of current status, funding schemes (R&amp;D and subsidies), projects and market perspectives, as well as international collaboration activities.</p>	
<b>Moderator: Haruhisa Koguchi, METI</b>	
<b>10:05 – 10:30</b>	Japan-NEDO <i>Activities of NEDO to commercialize stationary fuel cell systems</i> <b>Atsuo Okawara</b> , Chief Officer, Fuel Cell and Hydrogen Technology Development Dept.
<b>10:30 – 10:55</b>	USA-DOE <i>An Overview of the Status and Plans for Stationary Fuel Cells within the Fuel Cell Technologies Program</i> <b>Rick Farmer</b> , Deputy Program Manager and Chief Engineer for the U.S. FC Technology Program
<b>10:55 – 11:10</b>	<b>Break</b>
<b>11:10 – 11:35</b>	EU-Fuel Cells & Hydrogen Joint Undertaking <i>FCH – JU European public/private joint support for fuel cells and hydrogen activities</i> <b>Mirela Atanasiu</b> , Project Manager Stationary Applications
<b>11:35 – 12:00</b>	Germany-NOW GmbH <i>Cooperation as Success Factor for the German National Innovation Program</i> <b>Kai Klinder</b> , Managing Director, Program Management Stationary Fuel Cells
<b>12:00 – 13:10</b>	<b>Lunch Break</b>

Parallel Sessions 13:10 – 15:45

Parallel Session 1 - Room G602: Residential & Micro CHP Application

Parallel Session 2 - Room G610: Industrial Application (see next page)

**Parallel Session 1 Residential & Micro CHP Application 13:10 – 15:45**

**Room G602**

In the parallel sessions, speakers will discuss specific technologies as well as the challenges that industries are facing. The sessions will also focus on opportunities for cooperation, solutions for commercialization and best practices in overcoming hurdles.

**Chair: Osaka Gas Takahiro Kasuh, Associate director, General Manager**  
Japan, Toshiba

13:10 – 13:30	<i>Challenge to expand the commercialization opportunity with residential PEM, ENEFARM</i> <b>Yuji Nagata</b> , Technology Executive Europe, E.ON Ruhrgas AG
13:30 – 13:50	<i>Callux - The German Lighthouse Project for Market Introduction for Domestic Fuel Cell CHP Systems</i> <b>Dr. Stephan Ramesohl</b> , Vice President Research and Development Europe, Baxi INNOTECH
13:50 – 14:10	<i>Baxi Innotech - Gamma 1.0 - Large scale demonstration of residential PEFC systems in Germany - Status and outlook</i> <b>Philipp Klose</b> , Devision Manager R&D
14:10 – 14:25	<b>Break</b>
14:25 – 14:45	<i>Challenge the commercialization of the residential SOFC CHP</i> <b>Koji Kiryu</b> , L&E Development Dept. Japan, AISIN
14:45 – 15:05	<i>Challenges in Commercialising an Ultraefficient SOFC Residential Generator</i> <b>Dr. Karl Foeger</b> , Chief Technology Officer Australia, Ceramic Fuel Cells Ltd.
15:05 – 15:25	<i>Commercialization of ClearEdge5 --a 5 kW Fuel Cell System in the USA</i> <b>Zakiul Kabir</b> , CTO & Senior Vice President of Engineering U.S., Clear Edge Power
15:25 – 15:45	<i>Initial Stage of Commercialization of Residential Fuel Cells in Korea</i> <b>Dr. Dal-Ryung Park</b> , Principal Researcher, New Energy and Environmental Team, R&D Division Korea, KOGAS

**Parallel Session 2 Industrial Application 13:10 – 15:45****Room G610**

In the parallel sessions, speakers will discuss specific technologies as well as the challenges that industries are facing. The sessions will also focus on opportunities for cooperation, solutions for commercialization and best practices in overcoming hurdles.

**Chair: Toho Gas Dr. Yasunobu Mizutani, Executive Researcher**

	Japan, Fuji Electric Systems Co., Ltd.
<b>13:10 – 13:30</b>	<i>Present and Future of PAFC at Fuji Electric</i> <b>Kenichi Kuroda</b> , Fuel Cell Equipment Dept. Chiba Factory Industrial Solutions Group Environmental Solutions Business Headquarters
	U.S., UTC
<b>13:30 – 13:50</b>	<i>PureCell® Combined Heat and Power Fuel Cell Solutions</i> <b>Andrew Dasinger</b> , Sustainable Strategies Leader
	Korea, POSCO Power
<b>13:50 – 14:10</b>	<i>Energy Forever: Fuel Cell Power Business Intro</i> <b>Taehyoung Kim</b> , Group Leader, Business Strategy & Marketing Group, Fuel Cell Division
<b>14:10 – 14:35</b>	<b>Break</b>
	Japan, Mitsubishi Heavy Industries, LTD
<b>14:35 – 14:55</b>	<i>Current Status and Future Prospects for SOFC Triple Combined Cycle System</i> <b>Yoshinori Kobayashi</b> , Deputy General Manager, New energy systems department Power systems headquarters
	Denmark, Dantherm Power A/S (on Ballard Power Systems)
<b>14:55 – 15:15</b>	<i>PEM Fuel Cell Systems for Distributed Power Generation</i> <b>Jesper Thomsen, CTO</b>
	Europe, Wärtsilä Finland Oy
<b>15:15 – 15:35</b>	<i>Status of the Solid Oxide Fuel Cell System Development at Wärtsilä</i> <b>Kim Åström</b> , Senior Expert, System Development Product Centre Ecotech

**15:35 – 15:55 Break**

**Panel discussion: Technology and Market 15:55 – 17:15**

**Room G602**

*Vision: Think global, act local! Create a global market entry programme.*  
**The discussion will focus on challenges and solutions for overcoming hurdles to commercialization and ways to promote cooperation.**

**Moderator: UK Energy Research Centre, John Loughhead**

**15:55 – 16:15** Summary sessions,  
**John Loughhead**, Executive Director, UK Energy Research Centre

**16:15 – 17:15** Discussion

**Closing 17:15 – 17:25**

**Room G602**

**17:15 – 17:25** Closing Remarks  
**IPHE, Kai Klinder**, Managing Director, NOW GmbH

◆◆◆Tokyo International Forum ◆◆◆

5-1 Marunouchi 3-chome, Chiyoda-ku,  
Tokyo 100-0005, Japan  
E-mail : [forumpr@t-i-forum.co.jp](mailto:forumpr@t-i-forum.co.jp)

**Participant list**  
**4<sup>th</sup> IPHE workshop Stationary FC**  
**TOKYO INTERNATIONAL FORUM, 1<sup>st</sup> March 2011**

	surname	name	company/institution	position/title	country
1	Foeger	<b>Karl</b>	Ceramic Fuel Cells	Chief Technology Officer	Australia
2	Rowe	<b>Trent</b>	Ceramic Fuel Cells Ltd	Group General Manager - Product & Marketing	Australia
3	Eben	<b>Dy</b>	Research Associate	NRC-Institute for Fuel Cell Innovation	Canada
4	Tak	<b>John</b>	Canadian Hydrogen and Fuel Cell Association	President and CEO	Canada
5	Yonemichi	<b>Sanae</b>	Canadian Embassy	Trade Commissioner	Canada
6	How	<b>Terry</b>	Ballard Power Systems	Solutions Manager	Canada
7	Shi	<b>Zheng</b>	NRC Institute for Fuel Cell Innovation	Research Officer	Canada
8	Themsen	<b>Jesper</b>	Dantherm Power	CTO	Denmark
9	Balslev, Dr.	<b>Per</b>	Dantherm Power A/S	Director Business Development	Denmark
10	De Colvenaer	<b>Bert</b>	Fuel Cell and Hydrogen Joint Undertaking	Director	EC
11	Atanasiu	<b>Mirela</b>	Fuel Cell and Hydrogen Joint Undertaking	Project Manager Stationary Applications	EC
12	Åström	<b>Kim</b>	Wartsila	Senior Expert, System Development, Product Centre Ecotech, Fuel Cells	Finland
13	Koch	<b>Frank</b>	Fuel Cell and Hydrogen Network NRW	Vice Director	Germany
14	Klinder	<b>Kai</b>	NOW GmbH	Managing Director, Program Management Stationary Fuel Cells	Germany
15	Deason	<b>Kristin</b>	NOW GmbH	International Cooperation	Germany
16	Reimann	<b>Marc</b>	BAXI INNOTECH GmbH	Manager System Integration	Germany
17	Klose	<b>Philipp</b>	Baxi Innotech	Devison Manager R&D	Germany
18	Goldstein	<b>Raphael</b>	Germany Trade and Invest GmbH	Senior Manager	Germany
19	Rode	<b>Steffi</b>	NOW GmbH	IPHE Secretariat	Germany
20	Ramesohl	<b>Stephan</b>	E.On Ruhrgas AG	Vice President of Research and Development	Germany
21	Manini	<b>Andrea</b>	BAXI S.p.A.	Innovation & Renewables R&D Director	Italy
22	Hagiwara	<b>Akifusa</b>	TOKYO ELECTRIC POWER COMPANY	Specialist, Demand-side Technology Group III, R & D Center, Engineering R & D Division	Japan

23	Fukunaga	<b>Akihiko</b>	ENEOS CELLTECH Co., Ltd		Japan
24	Kato	<b>Akihiro</b>	ASAHI KASEI E-MATERIALS	Manager, New Business Development FC materials Department	Japan
25	Ueno	<b>Akira</b>	TOTO LTD.	General Manager	Japan
26	Maruta	<b>Akiteru</b>	Technova		Japan
27	Okawara	<b>Atsuo</b>	New Energy and Industrial Technology Development Organization (NEDO)	Chief Officer, Fuel Cell and Hydrogen Technology Development Dept.	Japan
28	Hachisu	<b>Eiichi</b>	JX Nippon Oil & Energy	Manager	Japan
29	Koguchi	<b>Haruhisa</b>	Ministry of Economy, Trade and Industry	Deputy Director, Technology Development	Japan
30	Matumoto	<b>Hiroto</b>	Idemitsu Kosan Co., Ltd.	Group Leader, Business Development Group, New Business Development Office	Japan
31	Hara	<b>Hitoshi</b>	NORITZ CORPORATION		Japan
32	Asakawa	<b>Iwami</b>	Germany Trade and Invest GmbH	Japan Representative	Japan
33	Tomuro	<b>Junichi</b>	ENAA		Japan
34	Yokoo	<b>Kazuhisa</b>	JX Nippon Oil & Energy Corporation	Manager	Japan
35	Furusaki	<b>Keizou</b>	NGK SPARK PLUG CO., LTD.	General Manager, SOFC Project, Engineering R & D Group	Japan
36	Kuroda	<b>Kenichi</b>	Fuji Electric Systems Co., Ltd.	Fuel Cell Equipment Dept. Chiba Factory Industrial Solutions Group Environmental Solutions Business Headquarters	Japan
37	Iida	<b>Kenta</b>	Ministry of Economy, Trade and Industry	Director, Hydrogen and Fuel Cell Promotion Office	Japan
38	Kitamura	<b>Kentaro</b>	THE KANSAI ELECTRIC POWER CO., INC.	ENERGY USE R&D CENTER RESEARCH & DEVELOPMENT DEPARTMENT	Japan
39	Okamura	<b>Kiyoshi</b>	Tokyo Gas Co., Ltd.	Senior Manager	Japan
40	Yamada	<b>Kohta</b>	ASAHI GLASS CO., LTD.		Japan
41	Kiryu	<b>Koji</b>	AISIN	L&E Development Dept.	Japan
42	Nishizaki	<b>Kunihiro</b>	Tokyo Gas Co., Ltd.		Japan
43	Yamaka	<b>Masataka</b>	Intelligent Energy	General Manager, Business Development	Japan
44	Yamamoto	<b>Osamu</b>	BASF - The Chemical Company	Fuel Cell Development Office	Japan
45	Nakajima	<b>Ryo</b>	Toshiba Corporation Power Systems Compan	Senior Manager, Fuel Cell Business Promotion Dept.	Japan

46	Amaha	<b>Shinji</b>	Tokyo Gas Co., Ltd.	SOFC Project, Product Development Dept.	Japan
47	Kimura	<b>Tadashi</b>	Toshiba Fuel Cell Power Systems Corporation	Senior Manager, Sales and Services Professional Engineer Jp, Mechanical Engineering	Japan
48	Kasuh	<b>Takahiro</b>	Osaka Gas Co., LTD.	Associate director, General manager, Fuel Cell Development department	Japan
49	Maruyama	<b>Takehiro</b>	Panasonic Corporation	Engineer	Japan
50	Kato	<b>Tohru</b>	National Institute of Advanced Industrial Science and Technology	Group Leader, Fuel Cell System Group Energy Technology Research Institute	Japan
51	Satomi	<b>Tomohide</b>	Fuel Cell Commercialization Conference of Japan		Japan
52	Komiyama	<b>Tomonari</b>	JX Nippon Oil & Energy Corporation	Global Marketing Manager	Japan
53	Machino	<b>Tsutomu</b>	Aso Humaney Center Inc.		Japan
54	Kawabata	<b>Yasuharu</b>	Tokyo Gas Co., Ltd.	SOFC Project, Product Development Dept.	Japan
55	Mizutani	<b>Yasunobu</b>	Toho GAS	Executive Researcher	Japan
56	Tuji	<b>Yoichiro</b>	Panasonic Corporation		Japan
57	Oka	<b>Yoshihiro</b>	Fuji Electric Systems	General Manager	Japan
58	Kawashima	<b>Yoshimi</b>	Idemitsu Kosan Co., Ltd.	Group Leader	Japan
59	Kobayashi	<b>Yoshinori</b>	Mitsubishi Heavy Industries, LTD	Deputy General Manager, New energy systems department Power systems headquarters	Japan
60	Shirasaki	<b>Yoshinori</b>	THE JAPAN GAS ASSOCIATION	Deputy Director, Fuel Cell & Hydrogen Project Group, R & D Dept.	Japan
61	Nagata	<b>Yuji</b>	Toshiba	Technology Executive	Japan
62	Sakuma	<b>Yuuichirou</b>	JX Nippon Oil & Energy Corporation	Deputy General Manager	Japan
63	Park	<b>Dal Ryung</b>	KOGAS	Principal Researcher, New Energy and Environmental Team, R&D Division	Korea
64	Jung	<b>Hataek</b>	POSCO Power	Team Leader, Business Strategy & Marketing Group Fuel Cell Division	Korea
65	Kim	<b>Taehyoung</b>	POSCO Power	Group Leader, Business Strategy & Marketing Group, Fuel Cell Division	Korea
66	Loughhead	<b>John</b>	UK Energy Research Centre	Executive Director	U.K.
67	Hughes	<b>Julian</b>	IECHP (UK & Eire) Ltd	Chief Operating Officer	U.K.
68	Dasinger	<b>Andrew</b>	UTC Power	Manager, Strategic Analysis	U.S.

<b>69</b>	Lensner	<b>Don</b>	Catacel Corp.	Business Development	U.S.
<b>70</b>	Delmont	<b>Elizabeth</b>	Breakthrough Technologies Institute	Environmental Specialist	U.S.
<b>71</b>	Hayashi	<b>Fujio</b>	NexTech Materials	Director of Business Development	U.S.
<b>72</b>	Sverdrup	<b>George</b>	National Renewable Energy Laboratory	Laboratory Program Manager	U.S.
<b>73</b>	Keller, Dr.	<b>Jay</b>	Sandia National Laboratory	Hydrogen Program Manager	U.S.
<b>74</b>	Gangi	<b>Jennifer</b>	Fuel Cells 2000	Program Director	U.S.
<b>75</b>	Ohi, Dr.	<b>Jim</b>	H2O-E	Consultant	U.S.
<b>76</b>	Mills	<b>Michael</b>	U.S. Department of Energy	Lead - International and Policy for Fuel Cell Technologies Program	U.S.
<b>77</b>	Farmer	<b>Rick</b>	U.S. Department of Energy	Deputy Program Manager	U.S.
<b>78</b>	Rose	<b>Robert</b>	Breakthrough Technologies Institute/Fuel Cells 2000	Executive Director	U.S.
<b>79</b>	Dawson	<b>William</b>	NexTech Materials	CEO	U.S.
<b>80</b>	Kabir	<b>Zakiul</b>	Clear Edge	CTO & Senior Vice President of Engineering	U.S.