

Natural Cas for Vehicles The Transportation Fuel of Choice

Asia Pacific Natural Gas for Vehicles Association - Progressing Through Partnership











ANGVA Biennial Report 2010-2011





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Summary



1.0 OVERVIEW

The Asia Pacific Natural Gas Vehicles Association (ANGVA) was established in 2002 and inaugurated as an international organization dedicated to the development of a growing sustainable and profitable market for vehicles powered by natural gas. The first board election was held in Oct 2003.

ANGVA serves the needs of fleet operators, vehicle manufacturers, gas suppliers, equipment suppliers, refuelling equipment providers, consultants, government representatives, NGOs and others involved with the natural gas vehicle industry by promoting the use of natural gas as a transport fuel, by defining industry standards and guidelines and by providing training.

ANGVA provides NGV related information to members and helps members to communicate and share their experiences for improving the NGV industry in their countries. Moreover ANGVA is dedicated to developing an industry with highest technical and safety standards covering the entire Asia Pacific region. ANGVA also involves the leadership of the NGV community to influence activities and policies that provide increased market opportunities.

The vision of the association is to make natural gas the transportation fuel of choice in the Asia Pacific region. This vision will be achieved through the development of a sustainable and profitable market for natural gas as an environmentally friendly transport fuel, throughout the region.

The activities of the Association are governed by the Board and its committees and implemented by the Secretariat which is based in Malaysia. The main sponsor of ANGVA Secretariat is PETRONAS, the national Oil and Gas Company of Malaysia.

ANGVA VISION

The vision of the association is to make natural gas the transportation fuel of choice in the Asia Pacific region.

ANGVA MISSION

The vision will be achieved through ANGVA becoming the Regional NGV Association of choice by:

- Assisting members making their NGV business more effective.
- Reducing emissions and greenhouse gases from the transportation sector.
- Optimising the use of indigenous fuel.
- Establishing a platform for harmonising standards throughout the region.
- Encouraging the development of NGV technology and refuelling infrastructure.

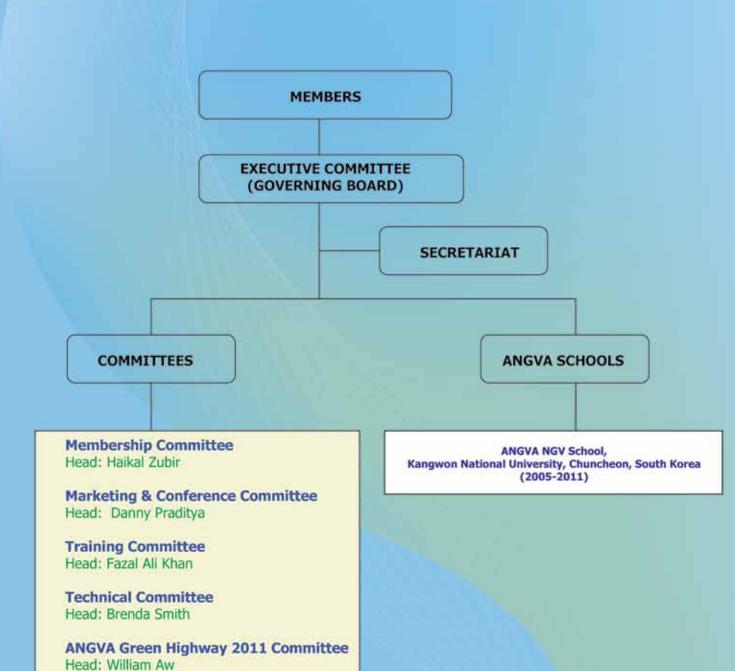
OBJECTIVES

The objectives of the association are:

- To provide a forum in which members can discuss matters relating to natural gas as a fuel for vehicles.
- To promote the development of sustainable and profitable market for natural gas vehicles.
- To encourage the development of natural gas vehicles technology and refuelling infrastructure.
- To advance knowledge and learning, and stimulate research in the areas of natural gas as fuel for vehicles.
- To collect, analyse and disseminate information to the use of natural gas as a fuel for vehicles.
- To promote standard of safety and uniformity of practices and standards relating to the use of natural gas as a fuel for vehicles.
- To organise conferences, exhibitions, seminars and trainings on the use of natural gas as a fuel for vehicles.



2.0 ANGVA ORGANISATION CHART





EXECUTIVE COMMITTEE (2010-2011) 1.1



Position

: Mr. Wichai Pornkeratiwat Company : PTT Public Company Limited : Senior Executive Vice

President, Gas Business Unit



: Mr Jin Gang

Company : Shanghai Diesel Engine Co., Ltd

Position : Vice President



: Mr. Fazal Ali Khan Name

: Emirates Gas LLC Company

Position : CNG Development Manager



Name : Ms. Brenda Smith

Company : Gas Advisers

: Managing Director Position



Name : Mr. Danny Praditya

Company : PT Citra Nusantara Gemilang

Position : Managing Director



: Dr Chitrapongse Kwangsukstith

Company: PTT International Company

Limited

Position : Chairman & Acting President



: Mr. M Haikal Zubir Name

Company: PETRONAS Dagangan Berhad

Position : Manager, Operations &

Technical Services, NGV Dept.



Name : Mr. Sean D Blythe

Company: Advanced Fuels Technology

Pty. Ltd.

Position : Chief Executive Officer



: Mr. William Aw

Company: Smart Energy Pte., Ltd

Position : Managing Director



: Mr. Lee Giok Seng

Company : PETRONAS

Position : Senior Manager



1.1 COUNTRY REPRESENTATIVES



Bangladesh

Name : Mr. Md Hasin Parvez

Company: Green Fuel CNG Conversion Centre

Position : Chief Executive Officer



Karen

Name : Mr Kevin Park Company : NGVI Inc Position : President



Pakistan

Name : Mr. Muazzam Hussain Ch.

Company: Oil And Gas Regulatory Authority

Position: Executive Director

1.2 ANGVA SECRETARIAT



Name : Mr. Lee Giok Seng Position : Executive Director



Name : Ms. Norhafiza Roosli Position : Senior Executive



Name : Ms. Aznita Saidin Position : Executive



1.0 ANGVA MEMBERS

Class A Members

No		Company	Country
1	APA Group	APT Facility Management Pty Ltd	Australia
2	EMERSON	Emerson Process Management Co.	China
3	dai(Node)	Emirates Gas LLC	UAE
4	MAN	IMW Industries Ltd.	Canada
5	WITERMECH	Intermech Limited	New Zealand
6	KwangShin	Kwangshin Machine Industry Co.,Ltd	South Korea
7	COMPOSITES	Lincoln Composite	USA
8	NIOPEC	National Iranian Oil Products Distribution Co (NIOPDC)	Iran
9	ENK	ENK Co., Ltd	South Korea
10	PETRONAS	PETRONAS	Malaysia
11	a ptt	PTT Public Company Limited	Thailand
12	SDEC	Shanghai Diesel Engine Co., Ltd	China
13	Sirne	Sime Darby Industrial Sdn. Bhd	Malaysia
14	Sinoma 中材科技	Sinoma Science & Technology (Su Zhou) Co.,Ltd.	China
15	Swagelok:	Swagelok Company	Malaysia
16	UMW	UMW Industrial Power Sdn Bhd	Malaysia
17	WOODWARD	Woodward	USA



Class B Members

No	Company	Country
1	CompAir	UK
2	Cummins Westport Inc.	China

Class C Members

No	Company	Country	No	Company	Country
1	Advanced Fuels Technology Pty. Ltd.	Australia	25	Kuala Lumpur Valve & Fitting (M) Sdn Bhd	Malaysia
2	Aldesa Autogas Equipments	Turkey	26	Landi Renzo	Italy
3	All Events Group Pte Ltd	Singapore	27	M.N.T Co.,Ltd	Myanmar
4	ANGI Energy Systems	USA	28	Maju Dancomair Sdn Bhd	Malaysia
5	Asian NGV Communications - NGV Communications Group	South Korea	29	Metal Mate Co., Ltd	Thailand
6	Associate High Pressure Technologies Pvt., Ltd	India	30	Metatron Control Systems (Shanghai) Co., Ltd.	China
7	Bangkok Exhibition Services Ltd	Thailand	31	Mirpur Ceramic Works CNG RS & CW	Bangladesh
8	BT Automotive Systems Sdn Bhd	Malaysia	32	NGV One Stop Centre Sdn Bhd	Malaysia
9	Bukit Sedap Pte Ltd	Singapore	33	NGVI	South Korea
10	C. Melchers GmbH & Co	Singapore	34	OMB Saleri Spa	Italy
11	Chongqing Silian Oil&Gas Equipment Manufacturing Co.,Ltd	China	35	PT Citra Nusantara Gemilang	Indonesia
12	Clean Air Power Pty Ltd.	Australia	36	PT Fajar Mas Murni	Indonesia
13	Compac Industries Ltd	New Zealand	37	Safe CNG Asia	Singapore
14	Compressed Gas Technology	UAE	38	Sammitr Green Power Co., Ltd	Thailand
15	Dynetek Industries Ltd	Canada	39	Shijiazhuang Enric Gas Equipment Co., Ltd	China
16	Eclipse Valves Limited	New Zealand	40	Smart Energy Pte Ltd	Singapore
17	Gas Advisers	Hong Kong	41	Tatsuno Engineering & Service Co., Ltd	Thailand
18	Green Fuel CNG Conversion Center	Bangladesh	42	Teesing Industrial Systems(Beijing)Co., Ltd	China
19	Hamayesh Sanat Institute	Iran	43	TN Engineering Sdn Bhd	Malaysia
20	IEV Energy Sdn Bhd	Malaysia	44	Truckquip Sdn Bhd	Malaysia
21	InnoTrend NGV (M) Sdn Bhd	Malaysia	45	Venus Gas Technology Co., Ltd	Thailand
22	JT NGV Holdings Sdn Bhd	Malaysia	46	Viridis Technologies (Asia) Ptd Ltd	Singapore
23	KazTransGas Onimderi	Kazakhstan	47	Xebec Adsorption South East Asia Pte Ltd	Singapore
24	Kraus Global Inc	Canada	48	Youngdo Ind. Co., Ltd	South Korea



Class D Members

No	Company	Country	No	Company	Country
1.	APCNGI (Asosiasi Pengusaha CNG Indonesia)	Indonesia	16	Korean Association NGV	South Korea
2	Ashar Halim	Pakistan	17	Majid Ansari	Pakistan
3	Babar Qazi	Pakistan	18	Muazzam Hussain Ch	Pakistan
4	Bangladesh NGV Association (BANGVA)	Bangladesh	19	Muhammad Abid Hayat	Pakistan
5	Capt. Shuja Anwar	Pakistan	20	Oil And Regulatory Authority	Pakistan
6	China Automotive Technology & Research Center (CATARC)	China	21	Pervaiz Khattak	Pakistan
7	Chuncheon City	South Korea	22	Samir Gulzar	Pakistan
8	Donghae City	South Korea	23	Seoul Metropolitan Government	South Korea
9	Fazal Moqeem	Pakistan	24	Shabbir Sulemanjee	Pakistan
10	Gangwon Provincial Government	South Korea	25	Sharjah Transport	UAE
11	Ghiyas Abdullah Paracha	Pakistan	26	Society for Urban Environmental Protection	Bangladesh
12	Hon Doug Parkinson M.L.C	Australia	27	Thailand NGV Association (TANGV)	Thailand
13	Jason Noah Neo	Singapore	28	The Japan Gas Association	Japan
14	Kangwon National University	South Korea	29	Universiti PUTRA Malaysia	Malaysia
15	Khalid Latif	Pakistan			

As of 30th September 2011 ANGVA has 96 members from 22 countries. Membership status by class as follows:

	As of 30th Sept 2011
Class A	17
Class B	2
Class C	48
Class D	29
Total No. of members	96



4.1 ANGVA Board Meetings

- 4.1.1 18th ANGVA Board Meeting, 15th January 2010, Bangkok, Thailand.
- 4.1.2 19th ANGVA Board Meeting, 12th May 2010, Beijing, China.
- 4.1.3 20th ANGVA Board Meeting, 25th April 2011, Bangkok, Thailand

4.2 ANGVA Members Meetings

- 4.2.1 ANGVA Strategic Plan Meeting, 14th January 2010, Bangkok, Thailand
- 4.2.2 ANGVA Green Highway 2011 Preliminary Meeting, 19th October 2010, Bangkok, Thailand.

4.3 ANGVA Workshops and Organised/Co-organised Events

- 4.3.1 CNG Cylinder Inspection Course, 23-25th June 2010, Bangkok, Thailand.
 4.3.2 CNG Cylinder Inspection Course, 28-30th June 2010, Kuala Lumpur, Malaysia.
 4.3.3 ANGVA Roundtable Session UAE, 27th 28th Feb 2011, Dubai, United Arab
- 4.3.4 ANGVA Tea-talk on Biomethane, 17th March 2011, Kuala Lumpur, Malaysia.
- 4.3.5 ANGVA Roundtable Indonesia, 12-13th July 2011, Jakarta, Indonesia.

4.4 Endorsement Events

- 4.4.1 2nd Annual CNG-NGV Vietnam Forum 2010, 29-31 March 2010, Ho Chi Minh City, Vietnam.
- 4.4.2 11th China International NGV and Gas Station Equipment Exhibition, 13-15th May 2010, Beijing, China.
- 4.4.3 3rd Annual CNG-NGV Indonesia Forum 2010, 28-30th July, Jakarta, Indonesia.
- Iran NGV 2010: 3rd CNG International Conference & Exhibition on CNG, 18-20th September, 4.4.4
- 4.4.5 CNG-NGV Thailand Forum 2010, 18-20th October 2010, Bangkok, Thailand.
- 4.4.6 NGV India 2010, 24-26th November 2010, Mumbai, India.
- 4.4.7 3rd CNG-NGV Vietnam Forum 2011, 25th 26th May 2011, Hanoi, Vietnam.
- 4.4.8 4th International Conference & Exhibition on CNG, 24-26th July 2011, Tehran, IR of Iran.

4.5 Participated Events

- 4.5.1 Green Tech Asia 2010, 22-25th April 2010, Kuala Lumpur, Malaysia.
- 4.5.2 NGV 2010: 12th IANGV Conference & Exhibition, 8-10th June 2010, Rome, Italy.
- 4.5.3 Malaysia Energy Forum, 9th August 2010, Kuala Lumpur, Malaysia
- 4.5.4 UNCRD's 5th Regional Environmentally Sustainable Transport Forum, 23 25th August 2010, Bangkok, Thailand.
- 4.5.5 Thai National Workshop on Clean Air for Smaller Cities, 26th August 2010, Bangkok, Thailand.
- 4.5.6 2010 China International Gas Summit (CIGS 2010), 26-28th August 2010, Guangzhou, China.
- 4.5.7 Gas Asia 2010 Forum, 12-13th October 2010, Kuala Lumpur, Malaysia.

- 4.5.8 6th Best Air Quality Forum 2010 (BAQ 2010), 8 11th Nov 2010, Singapore.
 4.5.9 3rd China LNG Summit, 13-14th January 2011, Shanghai, China.
 4.5.10 NGV Safety Awareness Campaign, 3rd March 2011, Kuala Lumpur, Malaysia.
- 4.5.11 NGVA Europe Berlin 2011, 7-9th Jun 2011, Berlin, Germany.
- 4.5.12 Natural Gas Logistic, Handling & Contracts, 18-22nd July 2011, Bali, Indonesia.

4.6 ANGVA Green Highways 2011

- 4.6.1 Background
- 4.6.2 The AGH2011's Logo, Torch and Message Scroll
- 4.6.3 ANGVA Green Highways 2011 Flag Offs and Torch Handovers

4.7 Income and Expenditure

- 4.7.1 Audited Income & Expenditure Statement Year 2009, 2010 & Un-audited 2011.
- 4.7.2 Audited Balance Sheet Year 2009 and 2010



4.1 ANGVA Board Meetings

4.1.1 18th ANGVA Board Meeting, 15th January 2010, Bangkok, Thailand.

The 18th Board Meeting was successfully held in Bangkok, Thailand on 15th January 2010. It was the first board meeting held since the new election of Governing Board Members at the third Biennial General Meeting, Donghae, South Korea for the terms of 2010-2011.

Various issues were discussed during the meeting including closing report of ANGVA 2010 from Mr. Choi Seoung Gyu of Donghae City. It was reported that 422 delegates from 32 countries attended the conference, 20 participated in the technical tour, and 20 in the safety workshop. For the exhibition, 93 companies from 33 countries took up 2,430 sq m of space. There were 1,900 visitors from 31 countries.

A formation of the new committees and respective heads for ANGVA Strategic Plan was discussed and approved. Among the activities that can be undertaken by the committees are the soliciting of memberships among non-members of the exhibitors of ANGVA 2009, the organisation of ANGVA's trade missions, the hosting of ANGVA receptions, hosting of pre-event receptions at fora / events endorsed by ANGVA, etc.

4.1.2 19th ANGVA Board Meeting, 12th May 2010, Beijing, China.

The 19th Board Meeting was held in CATARC Office, Beijing, China on 12th May 2010. ANGVA Board Members



present were Mr. Wichai Pornkeratiwat, Mr. Fazal Ali Khan, Ms. Brenda Smith, Ms. Brenda Smith, Mr. Lee Giok Seng and 13 other members as observers.

Various issues were discussed in the meeting including planning and preparation updates of ANGVA 2011 and new theme for Green Highway 2011 will focus on Heavy Duty Vehicles. ANGVA and CATARC also formalized the appointment of CATARC as host and organizer of ANGVA 2011 through a signing of an agreement by President of CATARC and ANGVA. Board members and the rest of the attendees were brought to visit ANGVA 2011 venue after the meeting adjourned.

4.1.3 20th Board Meeting, 25th April 2011, Bangkok, Thailand.

The 20th ANGVA Board Meeting was held on 25th April 2011 at PTT Plc Head Office in Bangkok, Thailand. The meeting was hosted by PTT Plc. A Welcoming Reception hosted by ANGVA President Mr. Wichai Pornkeratiwat, was held for board members and members in the evening of 25th April 2011 at PTT.

Among the highlights of items discussed were; All Events Group of Singapore and Beijing Qifa Exhibition Services China were appointed as exhibition agents by CATARC, the host of ANGVA 2011, the same concept of torch run from country to country as implemented for ANGVA Green Highways 2009 will be re-implemented for ANGVA Green Highways 2011.

To coincide with the meeting, Board Members were brought to technical visits to SCG Autogas Conversion Facility, Metal Mate Co Ltd in Bangkok.





4.2 Other Meetings

4.2.1 ANGVA Strategic Plan Meeting, 14th January 2010, Bangkok, Thailand

ANGVA Strategic Plan was conducted on 14th January 2010 at PTT PLC HQ, Bangkok Thailand. The focused on what are needed to achieve the vision and mission of ANGVA for the benefits of ANGVA's members and the NGV industry. A formation of the new committee members and respective heads was approved during the review.

4.2.2 ANGVA Green Highway 2011 Preliminary Meeting, 19th October 2010, Bangkok, Thailand.

In the evening of Day 2, ANGVA Green Highway 2011 (AGHP11) Preliminary Meeting was conducted and chaired by ANGVA Executive Director. AGHP11's Committee Head, Mr. William Aw was unable to attend the meeting due to urgent matter.

ANGVA decided to retain the previous AGHPs objectives: to create awareness and promote NGV, ANGVA and NGV infrastructure and to promote harmonisation of Standards and Code of Practices along the routes. The theme for AGHP11 was proposed to highlight heavy duty vehicles using NGV and biomethane.

4.3 ANGVA Workshops & Co-organised Events

2010

4.3.1 CNG Cylinder Inspection Course, 23-25th June 2010, Bangkok, Thailand.

The 3-days courses were organised by ANGVA in collaboration with TUV Saarland Automobil GmbH / TUV Rheinland Group, Germany. The trainer for the courses was Mr. Carl Wagner, Senior Expert / Trainer / Certifier from the Competence Center for Alternative Fuels, TUV. The course is designed to train participants to conduct re-inspection of CNG cylinders manufactured to ISO 11349 standard and UN ECE R110 regulations.



The course covered basic understanding of gaseous fuels (Natural gas, Biogas, Liquefied Petroleum Gas and Hydrogen), understanding of Regulations, Standards, Rules and Safety (ISO 11439 Standard and UN ECE R110 and R115 Regulations) and in-depth training on ISO 19078.

At the end of the courses, participants sit for a test to gauge their knowledge and understanding of the materials taught to them. 17 participants were successfully completed and passed the course and awarded with Certificate of Achievement issued jointly by TUV and ANGVA.



4.3.2 CNG Cylinder Inspection Course, 28-30th June 2010, Kuala Lumpur, Malaysia.

This series of CNG Cylinder Inspection Course continued to Kuala Lumpur, Malaysia on 28-30th June 2010. 17 participants were successfully completed and passed the course and awarded with Certificate of Achievement issued jointly by TUV and ANGVA.

The course concluded with better understandings of the need to periodically re-inspect and re-certify CNG Cylinders, and these must be conducted by certified CNG cylinder inspectors.



2011

4.3.3 ANGVA Roundtable Session UAE, 27th - 28th Feb 2011, Dubai, United Arab Emirates.

The ANGVA Roundtable Session was hosted by Emirates Gas LLC (EMGAS), a subsidiary of Emirates National Oil Company Ltd LLC (ENOC).

UAE is implementing NGV programme to reduce the harmful emissions from vehicles. It was reported that soon ADNOC will make available NGV from 17 stations i.e. 11 in Abu Dhabi, 2 in Al Ain and 4 in Sharjah. For Dubai, EMGAS will implement NGV programme in two phases - Phase I will consist of construction of 2 mother stations, 2 conventional (online) stations and 5 daughter stations (including daughter stations constructed at the fleet operator premises). Phase II will consist of construction of 6 mother stations, 19 conventional stations and 11 daughter stations in Dubai and Northern Emirates. The two phases will be from 2011 to 2014.

As a post event to the ANGVA Roundtable Session, a site visit to the Sharjah Electricity & Water Authority (SEWA)'s NGV station was arranged for delegates.







4.3.4 ANGVA Tea-talk on Biomethane, 17th March 2011, Kuala Lumpur, Malaysia.

The ANGVA Tea-Talk was successfully held at Sime Darby Industrial's training center, Puchong, Selangor, Malaysia. The afternoon tea-talk was supported by Xebec Adsorption South East Asia Pte Lte and Sime Darby Industrial Sdn Bhd. The talk was attended by 30 key industrial players from both government and private sectors including Ministry of Energy, Green Technology & Water, Malaysian Palm Oil Board, PETRONAS Dagangan, Gas Malaysia, Sime Darby Plantation, UMW and Exact Energy.

Main presentation of the day was presented by Mr Andrew Hall, Vice President of Asia Pacific Operation, Xebec Adsorption (Shanghai) Co. Ltd. with the topic "Technology for Upgrading Biogas to Bio-methane as Renewable Natural Gas for NGV"



4.3.5 ANGVA Roundtable Indonesia, 12-13th July 2011, Jakarta, Indonesia.

The Roundtable session was held on 12 -13th July 2011 at Sultan Hotel, Jakarta coinciding with the first flag-off of the Southern Route of the ANGVA Grenn Highways 2011. A total of 90 participants attended the roundtable with 4 exhibitors. Of particular interest at this roundtable is the strong participation from key Indonesian government agencies including Pertamina. The roundtable highlighted the renewed focus and coordination in the Indonesian government desire to push forward with the revival of the CNG programme in Indonesia. CNG was introduced in Indonesia about 25 years ago.





4.4 Endorsement Events

2010

4.4.1 2nd Annual CNG-NGV Vietnam Forum 2010, 29-31 March 2010, Ho Chi Minh City, Vietnam.

Following the success of the first CNG-NGV 2009 Forum in Ho Chi Minh City, Vietnam, All Events Group, VN Ventures and EDC co-organised the 2nd Annual CNG-NGV Vietnam Forum 2010. The three days event endorsed by ANGVA took place at New World Hotel Saigon, Ho Chi Minh City, Vietnam with the theme 'Implementing Pipeless Infrastructure for the Industrial and Public Transportation Sector'. The event was well attended by participants from various sector of NGV industry in Vietnam as well as overseas. There



were around 120 people attended the event including delegates, exhibitors, sponsors and media. A total of 7 exhibitors were also present to exhibit their products.

ANGVA Roundtable Session was conducted in the afternoon with the theme 'Challenging in Developing CNG



Infrastructure' and facilitated by ANGVA Executive Director. Panel members were Mr Punnachai Footrakul, PTT Plc, Thailand, Mr Haikal Zubir, PETRONAS, Malaysia and Mr Danny Praditya, PT CNG, Indonesia. On the third day, a technical visit to two mother daughter stations in Ba Ria, Vung Tau Province was organised. The first station was Petrovietnam Gas South's Mother Station and the next was CNG Vietnam's Mother Station. A total of 40 delegates were involved in the visit to the two stations. Delegates were ferried in a CNG bus for the technical visit.



4.4.2 11th China International NGV and Gas Station Equipment Exhibition, 13-15th May 2010, Beijing, China.

This three days event was organised by Beijing Qifa Exhibition Services Co., Ltd, China. ANGVA exhibited a booth at this event and manned by ANGVA member in China.



4.4.1 3rd Annual CNG-NGV Indonesia Forum 2010, 28-30th July 2010, Jakarta, Indonesia.

A total of 186 delegates attend this forum with 125 from Indonesia and 61 from overseas. A total of 19 exhibitors participated with 10 from Indonesia and 9 from overseas. Many interesting topics were presented and discussed including presentations from key Indonesian government agencies involving in the planning and implementation of the NGV programme in Indonesia.

In the morning of Day 1, a meeting between Mr. Zeinur A. Maitekov, General Director and Mr. Vladimir A. Utebekov, Deputy General Director of KazTransGas LNG of Kazakhstan was held between ANGVA Board members Danny Praditya, Fazal Ali Khan, Haikal Zubir and Lee Giok Seng to exchange views on the

development of NGV markets worldwide and also in Kazakhstan.



In the afternoon of Day 2, the ANGVA Lecture Series was held with the topic "Safety of NGV / CNG Station". The lecture was given by ANGVA Vice President and also Areas Sales Manager of LMF Middle East, Mr. Fazal Ali Khan. The lecture was attended by both local and overseas delegates.

On Day 3, a technical tour to 3 mother stations were organised by the Organiser. The three stations visited were PT. Citra Nusantara Gemilang Mother Station, PT. Cipta Niaga Gas Mother Station and PT. Berkah Mirza Insani Mother Station.

4.4.2 Iran NGV 2010: 3rd CNG International Conference & Exhibition on CNG, 18-20th September, Tehran, Iran.

The 3rd Iranian CNG International Conference and Exhibition, Iran NGV 2010, was successfully organised from 18 - 20th September 2010 at the Olympic Hotel, Tehran, IR of Iran. The event comprises of 2 days conference and 3 days exhibition with a Safety workshop included as part of the programme. This annual event was endorsed by both NGV Global (International NGV Association) and ANGVA for the third time.

The conference was attended by around 350 delegates, and 74 companies participated in the exhibition. A total of 12 countries were represented at the event - Iran, India, China, Australia, New Zealand, Netherlands, Singapore, Malaysia, Turkey, Venezuela, South Korea, and Poland. Among the exhibits were CNG cylinders (including those from China, Korea and India), cylinder valves and regulators.

A visit was made to PARS MCS CNG Cylinder Manufacturing Plant located near the city of Esfahan, about 340 km south of Tehran. PARS MCS manufactured Type 1 CNG cylinder with license from MCS Germany. On the way back from the visit to PARS MCS, brief visits were made to CNG stations located along the highway from Esfahan to Tehran.







4.4.1 CNG-NGV Thailand Forum 2010, 18-20th October 2010, Bangkok, Thailand

The CNG-NGV Thailand 2010 Forum was successfully organised from 18-20th October 2010 at Pathumwan Princess Hotel, Bangkok, Thailand. The three days event was organised by All Events Group and endorsed by ANGVA. A total of 120 delegates attended the forum from local and overseas companies. A total of 14 exhibitors participated with 2 from Thailand and 12 from overseas.

In the afternoon of Day 2, the ANGVA Lecture Series was held with the topic 'Introduction to Safety Practices in The Conversion, Operation, Maintenance and Inspection of CNG/NGV Cars, Trucks and Buses'. The interesting lecture was given by Dr. Pipon Boonchanta, Assistant Professor, Kasetsart University, Thailand. A technical tour to PTT Borommaratchachonnani Super NGV Station and PTT Gallapapreuk Mother Station in Bangkok were organised by the organiser and hosted by PTT PLC.

4.4.2 NGV India 2010, 24-26th November 2010, Mumbai, India.

NGV India 2010 was successfully held at the Bombay Exhibition Centre, Mumbai, India from 24th to 26th November 2010. Around 200 companies and over 5000 visitors and delegates from over 25 countries participated in the exhibition. Major Indian vehicles OEMs such as Maruti Suzuki, Mahindra & Mahindra and TATA Motors were also present as exhibitors. Among the attraction at the exhibition was the CNG two-wheeler (motorcycle). The event was organized by Bangkok Exhibition Services (BES) and endorsed by ANGVA.

Among the major issues facing the rapid growth of the NGV market in India are: lack of City Gas Distribution networks in major cities; lack of CNG refuelling stations; inadequate gas supply; need to enhance safety; and the situation of having two different type of vehicle refuelling receptacles i.e. the NZS receptacle and the NGV1 receptacle. With around 1 million natural gas vehicles, the issue of two different types of vehicle refuelling receptacles needs to be urgently addressed by the NGV industry in India.

The NGV market in India is set to grow more rapidly with the present of strong government support due to the needs to combat rising air pollution in the cities and reducing dependence on import oil (gasoline and diesel) to fuel the transport sector.





2011

4.4.7 3rd CNG-NGV Vietnam Forum 2011, 25th - 26th May 2011, Hanoi, Vietnam.

The CNG-NGV Vietnam Forum 2011 was successful held in the historic city of Hanoi, Vietnam, 25th - 26th May 2011. This was the 3rd NGV Forum held in Vietnam. The first and second fora were held in 2008 and 2009 in Ho Chi Minh City. The CNG-NGV Vietnam Forum 2011 saw the attendance of 98 delegates (70 % local and 30 % overseas) and 6 exhibitors from 18 countries. Local delegates comprised of key NGV players in Vietnam such as PetroVietnam, PV Gas South, CNG Vietnam JSC, Ministry of Natural Resources and Environment, Vietnam Register, and Vietnam Gas Association.

It was highlighted at the Forum that at the end of 2009 there were 1 CNG mother station, 1 daughter station and 2 CNG buses in Ho Chi Minh City. And by May 2011, PV Gas South had constructed additional 2 daughter stations (1 in Ho Chi Minh City and 1 in Ba Ria Vung Tau Province) and 1 mother station (at Hiep Phuoc Industrial Zone). Beside the 2 CNG buses, there are now 300 natural gas vehicles (150 taxis and 150 cars belonging to PetroVietnam Group) in operation in Vietnam.



4.4.8 4th International Conference & Exhibition on CNG, 24-26th July 2011, Tehran, IR of Iran.

The 4th International Conference & Exhibition was successfully held at the Olympic Hotel, Tehran, Iran. This is the fourth time that ANGVA endorsed this yearly event. The Western Route of the ANGVA



Green Highways 2011 was also launched and flag-off at this event on 24th July 2011.

Around 200 participants were present at the conference which also saw participation from delegates from China Korea, India, Pakistan, Armenia, Sri Lanka, Ghana, Turkey, UAE, and Malaysia. The exhibition was also well attended over the three days period with 60 exhibitors including from China, India and Armenia.



4.5 Participated Events

2010

4.5.1 Green Tech Asia 2010, 22-25th April 2010, Kuala Lumpur, Malaysia.

ANGVA was invited as an exhibitor at this event for four days. The event was organised by Fairs & Events Management Sdn Bhd. This event is to promote greener, healthier and sustainable planet. Participating exhibitors were divided into three major categories, Clean Tech, Energy Tech and Enviro Tech.

4.5.2 NGV 2010: 12th IANGV Conference & Exhibition, 8-10th June 2010, Rome, Italy.

A total of 260 delegates and 104 companies from 29 countries participated in the 3-days conference and exhibition. A total of 2500 visitors visited the exhibition (covering total of 3323 m2 space) and a total of 97 presentations were made at the conference (this includes 97 presented papers and 13 poster papers). A technical tour to a CNG / NGV Bus Depot for 30 participants was organised on 7th June 2010.

Before the conference closed, presentations on ANGVA 2011, Beijing, China, 18 - 20th October 2010 and IANGV NGV 2012, Chuncheon, Korea, 8 - 12th October 2012 were made by the respective hosts.

4.5.3 Malaysia Energy Forum, 9th August 2010, Kuala Lumpur, Malaysia

This forum was co-organised by Malaysian Gas Association (MGA) together with Suruhanjaya Tenaga (the Energy Commission of Malaysia) and the Energy Council of Malaysia at Sheraton Hotel, Kuala Lumpur. ANGVA was invited to participate at this forum and was represented by Executive Director. The forum discussed the energy situation in Malaysia.

4.5.4 UNCRD's 5th Regional Environmentally Sustainable Transport (EST) Forum, 23-25th August 2010, Bangkok, Thailand.

Executive Director of ANGVA attended this forum on invitation from United Nations Centre for Regional Development (UNCRD).

The 5th EST Forum was jointly organized by the UNCRD, Ministry of Natural Resources and Environment (MONRE) of the Kingdom of Thailand, Ministry of the Environment of the Government of Japan (MoEJ), and United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP).

The two days Forum covered various topics related to Environmentally Sustainable Transport including the use of compressed natural gas as a clean fuel for the transport sector.





4.5.1 Thai National Workshop on Clean Air for Smaller Cities, 26th August 2010, Bangkok, Thailand.

ANGVA Executive Director was invited to attend this Workshop as CNG / NGV can contributes to cleaner air for small cities in the ASEAN region.



The Workshop was jointly organized by the Thailand Pollution Control Department and the German Technical Cooperation organization (GTZ) under the ASEAN - GTZ "Clean Air for Small Cities" Project. Fourteen cities (with population between 200,000 to 1.5 million people) from seven countries from ASEAN (Thailand, Cambodia, Indonesia, Lao PDR, Malaysia, Philippines and Vietnam) participated in the Project. The overall objective of the Project is to empower smaller cities to develop and implement "Clean Air Action Plans" with the participation of civil society and the private sector. The duration of the first phase of the project, financed by the German Federal Ministry for Economic Cooperation and Development, is 4 years (2009-2012).

4.5.2 2010 China International Gas Summit (CIGS 2010), 26-28th August 2010, Guangzhou, China.

Vice President, Brenda Smith represented ANGVA at this event. This Summit was hosted by Guangdong Gas Association and ANGVA was invited to speak on NGV. Brenda Smith presented a paper on "The Development of NGVs in Asia" and included in her presentation messages on ANGVA, ANGVA 2011 and ANGVA Green Highway 2011. Around 60 people, mostly young executives attended the Summit.

4.5.3 Gas Asia 2010 Forum, 12-13th October 2010, Kuala Lumpur, Malaysia.

The Annual Gas Asia 2010 Forum was organized by The Energy Exchange at Mandarin Oriental Hotel, Kuala Lumpur, Malaysia. Executive Director was invited to present a paper on "Gas Transportation and Distribution Developments in Asia".

4.5.4 6th Best Air Quality Conference (BAQ 2010), 8th - 11th Nov 2010, Singapore.

BAQ 2010, with the theme "Air Quality in a Changing Climate" comprises of common Plenary sessions and six (60 breakouts sessions covering topics on: 1) Sustainable Urban Development, 2) Ambient Air Quality & Impacts, 3) Air Quality and GHG Management, 4) Transport Modes and Systems, 5) Clean Fuels and Vehicles, and 6) Technologies and Emissions Management. The conference was officiated by Singapore Minister of Environment and Water Resources, Dr. Yaccob Ibrahim.





4.5.1 3rd China LNG Summit, 13-14th January 2011, Shanghai, China.

The summit focused on the state of China's ongoing LNG projects as well as their equipment and service needs. ANGVA Vice President, Brenda Smith representing ANGVA, presented a paper on "The Development of Global Natural Gas Vehicles and The Principle Use of LNG as a Vehicle Fuel" at the summit.

2011

4.5.10 NGV Safety Awareness Campaign, 3rd March 2011, Kuala Lumpur, Malaysia.

The NGV Safety Awareness Campaign was organised by PETRONAS Dagangan Berhad at the NGV Station Bandar Tun Razak, Kuala Lumpur on 3rd March 2011. ANGVA was invited to participate and exhibit at the event. The event was well attended by important authorities such as Road Transport Department, Fire and Rescue Department as well as local NGV players and NGV users. PETRONAS Dagangan planned to have similar campaign throughout the country in the future.





4.5.11 NGVA Europe Berlin 2011, 7-9th Jun 2011, Berlin, Germany.

This event was hosted by NGV Association of Europe (NGVA Europe). ANGVA was represented by Vice President, Brenda Smith at this event. Brenda Smith also represented ANGVA at the IANGV/NGV Global Board Meeting held in Berlin on 8th June 2011.

4.5.12 Natural Gas Logistic, Handling & Contracts, 18- 22nd July 2011, Bali, Indonesia.

On the invitation of the Organiser, Executive Director presented a paper "Expanding LNG Distribution and Transportation Through Natural Gas Vehicles (NGV)" at this forum which concentrated mainly on small scale LNG plants. Potential and applications of small scale LNG plants for Indonesia were also highlighted during the forum.





4.6 ANGVA Green Highways 2011

4.6.1 Background

ANGVA Green Highways, which started in 2007, are implemented by ANGVA every two years to coincide with its biennial conference and exhibition. ANGVA Green Highways are events and activities involving various countries in Asia Pacific which will end in the country where ANGVA biennial conference & exhibition are held.

The objectives of ANGVA Green Highways are:

- 1. Create awareness and promote NGV, ANGVA and NGV infrastructure.
- 2. Promote harmonisation of NGV standards and Code of Practices esp. safety standards.
- 3. Create cooperation and exchange of information and experiences

ANGVA Green Highways are not about driving from points A to B. It is about getting local NGV industry and association involvement, to share and exchange information, experiences and networking. It is also about harmonisation of standards and practices and about creating "NGV and ANGVA Green Highways" to highlight the benefits of NGV in term of energy security and supply, economics and environment.

For ANGVA Green Highways 2011 (AGH2011), the following routes were chosen:



Western Route

Iran - UAE - Pakistan - Bangladesh - Myanmar - China.

Southern Route

Indonesia – Singapore – Malaysia – Thailand – Vietnam – China.

Eastern Route

Japan - Korea - China

All together thirteen (13) countries were involved along the three routes. The AGH2011's torches and friendships scrolls started its journey from each route to reach Beijing, China in time for the opening ceremony of ANGVA 2011 on 18th October 2011. All three torches and scrolls will be handed over to the host of ANGVA 2011, CATARC (China Automotive Technology and Research Center) at the opening ceremony of ANGVA 2011. Team leaders were appointed in each country to lead the planning and implementation of the AGH2011 events in their respective countries. Team leaders were also responsible for receiving the torch and scroll from the preceding country team and handing it over to the proceeding country team.



4.6.1 The AGH2011's Logo, Torch and Friendships Scroll

The Logo

The logo was slightly amended from the previous ANGVA Green Highways' logo with the addition of the international symbol for NGV refueling stations for dispensing CNG (Compressed Natural Gas) and LNG (Liquefied Natural Gas).





The Torch

The AGH2011's torch has three spirals moving from the base towards the globe on the top. The three spirals represent the three routes chosen for the AGH2011 i.e. Southern Route, Western Route and Eastern Route. The colour blue represents the universal colour of natural gas, which is clean and environmentally friendly – "Green". The three spirals were inspired from the DNA double helix, which symbolize that all teams participating in AGH2011 share the same DNA to promote the usage of natural gas as a clean or "Green" fuel for the transport sector.

The Friendships Scroll

The message scroll captures in writing the friendships, cooperation, and goodwill among all team members along the three routes as they bring the scrolls to Beijing, China to congratulate CATARC on the successful organizing and hosting of ANGVA 2011.



Friendships scroll message:





4.6.1 ANGVA Green Highways 2011 Flag Offs and Torch Handovers

Western Route

Team Iran Flag Off - 24th July 2011, Olympic Hotel, Tehran, Iran



Handing over of scroll to HE M.J. Mohammadizadeh (center) and HE M. Royanian, Special Representative of the President of Iran and also Head of Transportation and Fuels Management Committee (left) by Lee Giok Seng, Executive Director, ANGVA (right).



Team UAE Flag Off & Handover Ceremony - 28th September 2011, Dubai, UAE







Team Pakistan Flag Off - 1st October 2011, Islamabad, Pakistan



Team Bangladesh Flag Off - 5th October 2011, Dhaka, Bangladesh Team Myanmar Flag Off - 8th October 2011, Yangon, Myanmar



Southern Route Team

Team Indonesia Flag Off & Handover Ceremony - 12th July 2011, Sultan Hotel, Jakarta, Indonesia





Team Singapore Flag Off - 15th July 2011, Smart Energy's Mandai NGV Daughter Station, Singapore





Team Malaysia Flag Off & Handover Ceremony

- 15th July 2011, PETRONAS's Tampoi NGV Station, Johor Bahru &
- 20th September 2011, Sime Darby Industrial, Puchong, Selangor





Team Thailand Flag Off & Handover Ceremony

- 22nd Semptember 2011, MHC Petroleum NGV Refuelling Station, Hatyai, Thailand
- 23rd September 2011, Bangkok, Thailand









Team Vietnam Flag Off - 30th September 2011, HCMC CNG Station, Ho Chi Minh City, Vietnam







Eastern Route Team

- Team Japan Flag Off & Handover Ceremony

 6th September 2011, Sagawa Express Company Ltd's depot, Tokyo, Japan
 8th September 2011, Nagoya, Japan
 24th September 2011, Sakaiminato, Japan







Team Korea Flag Off
- 26th September 2011, KOGAS LCNG Station in Mang Sang, Donghae, South Korea





Team China Flag Off and Handover Ceremony - 15th October 2011, Xi'an, China - 18th October 2011, Beijing, China



Income and Expenditure

4.7.1 Audited Income & Expenditure Statement Year 2009, 2010 and Unaudited of 2011

Income	Audited 2009 (USD)	Audited 2010 (USD)	Unaudited 2011 (USD) As of 31 st August'11
Entrance & Subscription fees	51,397	50,472	26,358
Conference & Exhibition	100,044		100
Workshop, Forum & Endorsement	1,899	20,336	2,989
Total	153,340	70,808	29,347
Conference & Exhibition	8,404	13,627	
ANGVA Green Highways	6,963	3,593	15,918
Workshop	0	0	1000
Bank Charges	130	797	
Telephone Bill	652	600	413
Staff Salary	19,680	23,329	19,481
Staff Allowance	1,277	231	1
Local & Oversea Travelling	10,204	8,727	3,538
ICT (domain, webhosting, software)	2,015	1,480	1,921
Office Rental	11,629	10,897	5,240
Seminar & Training	307	0	
Printing, Stationary & Office Equipment	815	1,882	560
Depreciation of Fixed Assets	2,417	2,738	
Courier & Postage	334	101	111
Audit & Tax Advisory Fee	3,884	18,447	1,741
Sundry Expenses	11,498	22,667	1,171
Subscription	3,142	2,588	1,111
Total	83,351	111,704	51,205
Surplus of income over expenditure before tax	69,989	(40,896)	(21,858)
Taxation	310	0	
Surplus for the period	69,679	(40,896)	(21,858)



4.7.2 Audited Balance Sheet Year 2009 and 2010

Asia Pacific Natural Gas Vehicles Association (Incorporated under the Societies Act, 1966)

Balance Sheet as at 31 December 2010		
	2010	2009
	USD	USD
Non-current asset		
Equipment	3,533	5,939
Current asset		
Cash at bank	138,224	71,523
Other receivables	19,157	115,563
	157,381	187,086
Current liabilities		
Other payables	9,309	10,699
Tax payables	0	0
	9,309	10,699
Net current assets	148,072	176,388
	151,605	182,327
Represented by:		
Accumulated funds		
At 1 January	192,501	112,648
Surplus for the year	-40,896	69,679
At 31 December	151,605	182,327

ANGVA had carried out many activities and programmes for the past two years (2010-2011). ANGVA will continue to conduct its activities and programmes as per its strategic plan for the benefits of its members and the NGV industry for the coming term of 2012-2013. ANGVA would like to invite members to support and actively participated in all its activities and programmes. Sponsorships and contributions are most welcome.

The next Biennial Report will be issued during the next Biennial General Meeting to coincide with the 5th Biennial Conference & Exhibition, ANGVA 2013, in New Delhi, India, 29-31st October 2013.

^{1.} The Income and Expenditure and Balance Sheet for 2009 and 2010 were abstracted from the certified audited accounts report prepared by the appointed external auditor firm of Ernst & Young. The reports were in the currency of Malaysian Ringgit (MYR). The conversion rates used for the above reports were: for 2009 - MYR1 = USD 0.3424; for 2010 - 1MYR = USD0.3243. Members wishing to view the Audited Account Reports for 2009 and 2010, please contact the ANGVA Secretariat.

^{2.} The Income and Expenditure for 2011 (up to 31st Aug '11) is based on current status and not yet audited. Conversion rate used for 2011: 1MYR = USD0.2980



