



行政院及所屬各機關因公出國報告書
(出國類別：出席國際會議)

出席亞太經濟合作(APEC)「APEC 邁向 2020 及
之後多邊利害關係人對話」

服務機關：經濟部能源局

姓名職稱：陳炯曉科長

派赴國家：巴布亞紐幾內亞摩勒斯比港

出國期間：107 年 8 月 12 日至 8 月 17 日

報告日期：107 年 11 月 15 日

行政院及所屬各機關出國報告提要

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頁數__11__含附件：■是□否

出國計畫主辦機關聯絡人/電話

出國人員姓名/服務機關/單位/職稱/電話

陳炯曉/經濟部能源局綜合企劃組科長/(02) 27747714

出國類別：□1 考察 □2 進修 □3 研究 □4 實習 ■5 其他

出國期間：107 年 8 月 12 日至 8 月 17 日

報告期間：107 年 11 月 15 日

出國地區：巴布亞紐幾內亞摩勒斯比港

分類號/關鍵詞：亞太經濟合作

內容摘要：

APEC 在 1994 年訂立茂物目標，將在 2020 年到期。爰 APEC 正討論 APEC 邁向 2020 及之後的新願景，並由各會員體各推薦 1 人成立 APEC 願景小組 (AVG)，提供建議。本次對話為 APEC 資深官員與 APEC 願景小組的聯合對話，邀請國際組織及 APEC 重要次級論壇領導者與會。應 APEC 秘書處邀請，陳炯曉以能源工作組主席身分，出席本對話，並擔任第三場次「包容性與永續成長」之與談人。展示對我擔任此領導角色的肯定。

陳炯曉指出，APEC 的永續成長面臨四大挑戰：能源安全、能源轉型、能源取得、能源投資。此次，對於掌握 APEC 區域發展動向，彰顯我國主導角色，具有正面貢獻。

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- 1. Outline-2018 Multi Stakeholder Dialogue on APEC Toward 2020 & Beyond**

壹、目的

APEC在1994年訂立茂物目標，將在2020年到期。爰APEC正討論APEC邁向2020及之後的新願景，並由各會員體各推薦1人成立APEC願景小組 (AVG)，提供建議。本次對話為APEC資深官員與APEC願景小組的聯合對話，邀請國際組織及APEC重要次級論壇領導者與會。應APEC秘書處邀請，陳炯曉以能源工作組 (Energy Working Group, EWG) 主席身分，出席本對話，並擔任第三場次「包容性與永續成長」之與談人。展示對我擔任此領導角色的肯定。

陳炯曉發言主要目的，強調能源工作組的貢獻，以及指出APEC所面臨的能源挑戰。能源工作組雖僅為APEC下50餘個次級論壇中的一個，但每年執行的APEC計畫數目，卻高達APEC總計畫數目的五分之一到四分之一，是最為活躍的次級論壇。能源貿易也達APEC總貿易金額的十分之一。因此，APEC願景不可以缺少能源領域。陳炯曉指出，未來APEC願景需解決4大能源挑戰：能源安全、能源轉型、能源取得、能源投資。

貳、過程

陳炯曉此次行程如次：

- 8 月 30 日：出國，自臺北經澳大利亞布里斯本前往巴布亞紐幾內亞摩勒斯比港
- 8 月 15 日：出席「APEC 邁向 2020 及之後多邊利害關係人對話」
- 8 月 16 日及 17 日：返程，自巴布亞紐幾內亞摩勒斯比港經澳大利亞布里斯本返回臺北

(一) 對話進行

對話之議程與目的如附件 1。

開幕式由地主國巴布亞紐幾內亞副首相 Charles Abel、ABAC 主席 David Toua、PECC 共同主席 Su Ge 大使、及 APEC 願景小組主席 Allan Wagner 大使共同進行。

本次對話除開幕式及茂物目標專題演講外，對話分四場次：

1. 服務與貿易
2. 貿易促進、供應鏈、及聯結性
3. 包容性與永續成長
4. 平衡、創新及安全成長

應 APEC 秘書處邀請，陳炯曉以能源工作組主席身分，出席本對話，並擔任第 3 場次「包容性與永續成長」之與談人。我國除 AVG 代表林之初擔任本次對話與談人外，陳炯曉是唯一我國另一與談人。

陳炯曉指出，APEC 的永續成長面臨四大挑戰：能源安全、能源轉型、能源取得、能源投資。能源供應是滿足一切發展與經濟社會活動的基礎，不解決能源挑戰，其他願景均不可能實現。

會後 AVG 小組與資深官員再進行 2 日之聯席會，討論 APEC 願景需面對之挑戰。能源挑戰被納入其中。

(二) 陳炯曉發言摘要

陳炯曉發言全程使用英文，備忘摘要如下：

How is the Energy Working Group advancing sustainability?

- We must understand that ‘sustainability’ or ‘sustainable development’ is an overarching framework, which encompasses many facets.
- Secure and sustained supply of energy is the necessary condition, rather than the sufficient condition of sustainable development. Without secure and reliable energy supply, many visions today will not happen. Without electricity, you cannot have digital economy.
- For energy, sustainability means three criteria:
 1. First, there is continuous supply of energy to meet the need; neither supply disruption nor resource depletion;
 2. Second, the energy supplied is affordable by all;
 3. Third, the pollution associated with energy use should not exceed the assimilative power of local environment.
- Based on these criteria, the efforts of Energy Working Group have focussed on the Energy Security, promoting renewable energy, enhancing energy efficiency, and cleaner use of fossil fuels. All these efforts enhance ‘sustainability’. Each Year, EWG has about 20 new projects with APEC funding, and another 10 self-funded projects. In term of project numbers, EWG alone contributes about one-fifth to one quarter of all APEC projects.
- The current key policy goals for energy include the Leaders' Instructions on:
 1. the goal of Energy Intensity Reduction of 45 % by 2035; APEC could achieve this goal.
 2. the goal of Renewable Energy Doubling in the energy mix by 2030; APEC cannot achieved this goal on time.
 3. and the Reform of Inefficient Fossil Fuel Subsidy; APEC and G20 are the only two international organisation working on this.
- EWG has focussed on the Energy Security Initiative, the flagship initiative since 2002. Energy Security is the most important mission of the EWG. Several activities have been promoted under this flagship Initiative. Currently, we have the Oil & Gas Security Initiative to deal with the supply security. And, the Initiative on Energy Resilience and Modernisation of Infrastructure to deal with the physical safety of energy infrastructure.

- Another major activity is the Energy Smart Communities Initiative of year 2010. This initiative focusses on the integrated promotion of renewable energy and energy efficiency simultaneously at community-level.
- Two cross-pillar activities are coordinating the Energy Smart Communities. One is the Low Carbon Model Town. Each year, we choose one community from member economies to design its future development as a show case. To date, seven such Low Carbon Model Towns have been achieved. The second is the Knowledge Sharing Platform. We set up a website to collect the best cases from member economies. To date, more than 600 best cases on smart communities are demonstrated in the website.
- Besides these five Leaders' instructions, we have around a dozen of Minister-level initiatives for specific efforts.
- EWG has established a range of policy reviews to assist member economies in improving their energy policy and seek more coherence to APEC Goals. These Peer Reviews include Peer Review on Energy Efficiency, Low Carbon Energy Policy, and Inefficient Fossil Fuel Subsidies. We also have energy data analysis and long-term energy outlook to check and guide our progress.
- From the above short introduction, you may notice that EWG maintains one of the most extensive portfolios of works in APEC. This is the efforts of EWG representatives.

Future Challenges

- Some findings to share from the APEC Energy Demand and Supply Outlook, 7th edition, to be published in April 2019.
- Energy future up to 2050

A. Challenge on energy security

- APEC in total has an increasing shortage of energy production and gradual relies on non-APEC source. The shortage was 727 Mtoe in 2015 and shall increase to 1297 Mtoe in 2050.
- APEC members include largest producers and consumers; huge trade within APEC on energy sources, especially fossil fuels. Trade of fossil fuels alone (HS27) is 9.92% of APEC trade in goods in 2017, 1.77 billion USD; but traditionally this energy trade is rarely covered under WTO ruling.
- Sustained and secure supply of energy is indispensable for economic development, especially for digital economy.
- Energy resilience for natural and man-made disasters on energy infrastructure and build-back better.

- Leaders' APEC Energy Security Initiative was endorsed in 2002; out-dated, modernisation is needed.

B. Challenge on energy transition

- APEC Member Economies currently rely on fossil fuels now, especially coal. In future, more clean and sustainable energy are needed, but fossil fuels are still the dominant energy sources, accounting for 68% of final energy demand in 2050.
- Leaders have instructed their Aspirational Goal on energy intensity reduction at least 45 % by 2035 and doubling share of renewable in APEC energy mix by 2030. But, much more extra actions are needed to fulfil the renewable doubling goal.

C. Challenge on energy poverty

- More than 1 billion people have no electricity supply; more than 3 billion people have no modern fuel supply, globally. Thus the need of Energy Access: the sustainable and affordable energy supply for all.
- Poverty is the single largest reason of environmental degradation. Poverty and environmental degradation hurt women and children disproportionately; thus gender inequality. We should improve energy access and economic growth that is inclusive of women and provides positive economic and social benefits across the region.
- This energy poverty is exactly the concern of inclusive growth, no one should be left behind.

D. Challenge on energy investment

- Huge demand on investment in energy infrastructure to tackle the above three challenges.
- By 2035, APEC needs further energy investment totals 40 trillion USD, with an additional 8 trillion USD for energy efficiency.
- Governmental investment is not enough for the task; only private sector has this money. We must work on facilitation and mobilisation of private-sector investment.

VISION: A clean, affordable, sustainable and secure energy system.

- We sincerely request support through recognition and guidance in the APEC Post 2020 Vision to enhance joint efforts to make a better APEC energy future.

肆、心得與建議事項

APEC 是我國少數可以正式與會之國際官方組織。爰此，我國宜以適當形式，持續參與 APEC 各項活動，以及時掌握世界發展動向，以及增加我國國際能見度。

應 APEC 秘書處邀請，陳炯曉以能源工作組主席身分，出席本對話，並擔任第 3 場次「包容性與永續成長」之與談人。我國除 AVG 代表擔任本次對話與談人外，陳炯曉是唯一我國另一與談人。此次，對於掌握 APEC 區域能發展動向，彰顯我國主導角色，具有正面貢獻。惟 APEC 各項職務均有任期制，我國宜未雨綢繆，積極培育年輕同仁英語表達能力及對各項議題掌握深度及廣度，強化本身專業知能，俾利未來在國際場域發揮主導力與貢獻。

APEC 的永續成長面臨四大挑戰：能源安全、能源轉型、能源取得、能源投資。能源供應是滿足一切發展與經濟社會活動的基礎，不解決能源挑戰，其他願景均不可能實現。這四大挑戰也是陳炯曉帶領 APEC 能源工作組，推動 APEC 能源合作的重點。倘若藉由本 APEC 後 2020 願景的討論與制訂可予以制度化，可進一步型塑整合 APEC 能源合作之整體方向。

本次對話僅討論挑戰，陳炯曉正領導能源工作組討論能源願景與對策，俾利明年向 APEC 資深官員說明及爭取納入 APEC 後 2020 願景。

附件：

**1. Outline-2018 Multi Stakeholder Dialogue on APEC Toward 2020
& Beyond**



**Asia-Pacific
Economic Cooperation**