

# Clarifying the Thailand solar feed-in tariff situation

4 February, 2011

Chris Greacen

## Background

Measuring by vigorous interest displayed by the private sector, and by the number of applications posted to generate electricity from solar installations, the Thai government's subsidy program on solar electricity has been a raging success. As of October 2010, applications have been submitted to the Very Small Power Producer (VSPP) program for 397 photovoltaic (PV) projects totaling 1,600 MW and for an additional 302 concentrating solar thermal (CST) projects totaling 1503 MW. In addition, eight solar projects totaling 477 MW have been submitted to the Small Power Producer (SPP) program.

Of these, as of October 2011, only 55 projects totaling 16 MW (PV) were selling electricity to the Thai utilities. No CST projects are yet online. The remaining 3500 MW are in the pipeline in various stages.

This pipeline concerned policy makers for several reasons. First, the quantity was considerably higher than the Thai solar target (55 MW by 2011, 95 MW by 2016, and 500 MW by 2022)<sup>1</sup>. Note – this was a *target*, not a cap. But it does say something about Thai policy maker expectations.

Second (and perhaps most important), policy makers were concerned about tariff impacts to consumers. The money to pay for renewable energy subsidy adder comes from rate payers. For solar, the subsidy adder was set at 8 baht/kWh. This could have a considerable tariff impact considering that typical retail tariffs are 2.5 baht/kWh and Thailand's 3 GW of solar is potentially over 10% of Thailand's peak load. 3 GW of solar at 15% capacity factor could add a net burden to consumers of 31 billion baht/yr.

Third, there was concern that many of these projects applications were speculative in nature, and were clogging the pipeline by occupying locations where legitimate projects use the substation capacity.

Forth (and not at all legitimate in my opinion) Thai National Energy Policy Council (NEPC) stated that "if new purchases of VSPP renewable energy increased it would cause a problem with the security of

---

<sup>1</sup> Sarochawikasit Rangsan (2009). Alternative Energy Development Plan (2008 – 2022), Medium - and Long – term Investment Plan and the Role of the Private Sector.

<http://www.google.co.th/url?sa=t&source=web&cd=1&ved=0CUBUQFjAA&url=http%3A%2F%2Fsitesresources.worldbank.org%2FINTTHAILAND%2FResources%2F333200-1089943634036%2F475256-1232532308749%2F5753865-1248058855014%2Fdr.rangsan-dede.ppt&ei=RHpLTefAAoeyrAeXhJHbBg&usg=AFQjCNHkWN7fBucwdF2PxHwoDdRtE52LoA>

EGAT's transmission system and therefore electricity security of the whole country.”<sup>2</sup> There may be some isolated locations cases where the system is not robust enough to accept substantial new additions of intermittent renewables, but stating categorically that increases in renewable energy VSPPs will cause security problems in the EGAT's system security is both grossly inaccurate and runs counter to the Ministry of Energy's policy directives of increasing energy self-reliance, supporting renewable energy, and environmental protection.<sup>3</sup>

## Responses

### **Adder reduced to 6.5 baht/kWh for projects not approved as of June 28, 2010**

In response on July 28, 2010 the Thai National Energy Policy Council (NEPC) passed a resolution<sup>4</sup> that lowered the 10-year feed-in tariff adder from 8 baht/kWh to 6.5 baht/kWh for all solar projects that were still in the pipeline but not yet approved.<sup>5</sup> The resolution (section 13.3).also stated that after June 28, 2010, new solar applications were no longer accepted.

Note – the 6.5 baht/kWh remains an adder, on top of the avoided wholesale tariff that the solar farm receives.

### **Move towards feed-in tariffs to replace adder**

The same resolution (section 12.1) agrees in principle to work towards establishing a fixed feed-in tariff rather than an adder, but thus far no concrete details of this have emerged.

### **Rooftop PV**

The same resolution (section 12.2) agreed in principle to establish a separate, higher feed-in tariff for rooftop PV (on residences and commercial buildings), with amounts to be determined at a future NEPC meeting.

### **Concentrating solar thermal PPAs cannot be changed to PV PPAs.**

Many of the PPAs in the VSPP program were for concentrating solar thermal. Many developers sought to change these PPAs to PV. On 27 January 2011 a decision by a committee established by the NEPC was made to not allow this change.

---

<sup>2</sup> “หากปริมาณรับซื้อไฟฟ้าจากพลังงานหมุนเวียนของ VSPP เพิ่มมากขึ้น จะทำให้มีปัญหาด้านความมั่นคง ของระบบส่งของ กฟผ. ซึ่งจะทำให้มีผลกระทบต่อความมั่นคงของระบบไฟฟ้าของประเทศไทยได้.” Source: มติคณะกรรมการนโยบายพลังงานแห่งชาติ ครั้งที่ 2/2553 (ครั้งที่ 131). เรื่องที่ 5 มาตรการส่งเสริมการผลิตไฟฟ้าจากพลังงานหมุนเวียน, Section 10.4 (2). <http://www.eppo.go.th/nepc/kpc/kpc-131.htm#5>.

<sup>3</sup> THAILAND'S ENERGY POLICY delivered to the National Assembly on 30 December 2008 by Mr. Abhisit Vejjajiva, Prime Minister of Thailand. <http://www.eppo.go.th/doc/policy-wannarat-12jan2552-E.pdf>

<sup>4</sup> มติคณะกรรมการนโยบายพลังงานแห่งชาติ ครั้งที่ 2/2553 (ครั้งที่ 131). <http://www.eppo.go.th/nepc/kpc/kpc-131.htm#5>.

<sup>5</sup> “กรณียื่นคำร้องขายไฟฟ้าแล้วรอการพิจารณา เห็นควรปรับปรุงอัตราส่วนเพิ่มฯ สำหรับผู้ประกอบการพลังงานแสงอาทิตย์ที่ยื่นคำร้องขายไฟฟ้าแล้วแต่ยังไม่ได้ รับการพิจารณารับซื้อไฟฟ้า ณ วันที่ กพข. มีมติเห็นชอบ ในอัตรา 6.50 บาทต่อหน่วย ระยะเวลาสนับสนุน 10 ปี”