The Case for Saving Sunrise

Submitted to the government of Timor-Leste
*by Charles Scheiner, La'o Hamutuk**
28 July 2004

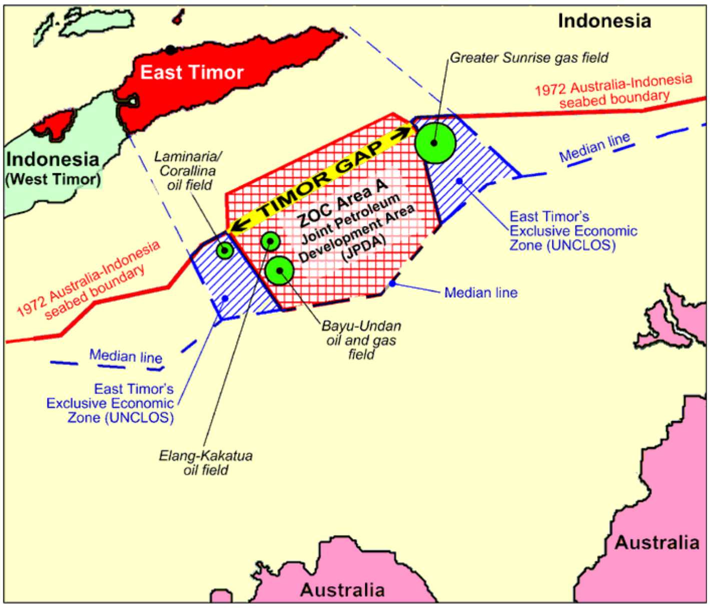
Introduction

Only two years into self-government, Timor-Leste faces many difficult decisions. Some of the most critical for the country's long-term future involve the Greater Sunrise oil and gas field, Timor-Leste's most valuable natural resource. Complex questions of boundaries, development plans, ownership, and timetable need to be decided. Stakeholders, including oil companies, the Australian government, international financial institutions and aid agencies, are telling Timor-Leste what it should do, in light of their respective interests.

The most important stakeholder – the people of Timor-Leste – would be best served by sequential, rather than simultaneous, development of Timor-Leste's two major petroleum fields, postponing Sunrise development for at least a decade. This would allow time to make wiser decisions, and would help Timor-Leste maximize its petroleum revenues. Although neither Australia nor the oil companies currently prefer this path,[1] Timor-Leste's government is responsible for the long-term well-being of its own citizens, and that should be the primary consideration.

This paper presents the reasons for developing Greater Sunrise after Bayu-Undan, saving Sunrise gas in the ground for 10-15 years, to maximize benefits for Timor-Leste.

Background



Timor-Leste's offshore resource entitlement includes two large petroleum reserves in the Timor Sea between Timor-Leste and Australia, Bayu-Undan and Greater Sunrise. The smaller of the two, Bayu-Undan, is entirely in the Joint Petroleum Development Area (JPDA) established by the Timor Sea Treaty.[2] Upstream (extraction) Bayu-Undan taxation revenues are divided 90%-10% between Timor-Leste and Australia, while nearly all the downstream (processing) revenues go to Australia. Bayu-Undan has just begun the first phase of production (liquids), with the

[1] This paper is written for officials, advisors, and supporters of Timor-Leste, not oil companies or Australian officials. There are good reasons for Australia and the oil companies not to oppose sequential development, but they are beyond the scope of this article, which discusses what's best for Timor-Leste.

[2] The Timor Sea Treaty, signed between Timor-Leste and Australia on Timor-Leste's first day of independence in May 2002, is an interim agreement covering about 40% of the oil and gas reserves in Timor-Leste's legally-entitled maritime territory, including all of Bayu-Undan and 20.1% of Greater Sunrise. The treaty lapses when a permanent maritime boundary is established or in April 2033, whichever comes first.

* The author is a consultant to the East Timor Institute for Reconstruction Monitoring and Analysis *(La'o Hamutuk)*, and can be reached at cscheiner@igc.org. New York telephone +1-914-831-1098 or +1-914-4737-3185. Dili telephone +670-723-4335 or +670-3325013.

second phase (gas piped to Australia for liquification) to start in two years. As described in Appendix I of this paper, this field will provide sufficient revenue to meet Timor-Leste's projected government budget requirements from 2005 through 2021, with US$1.8 billion left over to be put aside for future years.

The larger field, Greater Sunrise, lies 20.1% within the JPDA and 79.9% outside, in an area of the seabed in dispute between Australia and Timor-Leste. Australia and the oil companies hope that the terms of Production Sharing Contracts signed during Indonesia's illegal occupation of Timor-Leste will continue, but the Sunrise Joint Venture has not yet decided on a development plan or begun development for production, although they have already spent more than $100 million.[3] Further development is pending ratification by Timor-Leste's parliament of an interim International Unitization Agreement (IUA), to be followed by approval of a Sunrise Development Plan by both governments.[4] Sunrise is estimated to contain 8.4 trillion cubic feet of natural gas, more than twice as much as Bayu-Undan. Timor-Leste has no other natural resources of comparable value, so these petroleum fields must to provide investment and economic development for countless future generations.

Woodside Petroleum and its Sunrise partners (ConocoPhillips, Royal Dutch Shell, and Osaka Gas), as well as the Australian and Northern Territory governments, are eager to develop Sunrise as quickly as possible, and often pressure Timor-Leste's government to act hastily and surrender options so that development can proceed.[5] To this date, no contracts have been signed, and the basic development decision – where to liquefy the natural gas – has not been made. Shell and Woodside would like to experiment with the world's first floating liquid natural gas plant (FLNG), while the Australian and Northern Territory governments want to pipe the gas for processing in Darwin, envisioning more jobs and spin-off revenues than Bayu-Undan is already providing. Timor-Leste's government, on the other hand, suggests a pipeline to Timor-Leste, hoping to bring jobs and development to a new processing facility on their southern coast. A pipeline to East Timor would be shorter than one to Australia and, while probably technically feasible, would be one of the deepest ever built.

This paper suggests that none of those options should be pursued at this time. Rather, the choice which would benefit Timor-Leste's people most over the long term is to develop Sunrise after Bayu-Undan. With Bayu-Undan revenues coming in, Timor-Leste has no anticipated requirement for money from Greater Sunrise for at least 17 years. On

---

[3] Woodside Petroleum submission to the Australian Senate Economics Legislation Committee, March 2004: "The Sunrise Joint Venture has invested in excess of A$200 million in exploration, appraisal and concept development activities for the project."

[4] The IUA was signed in March 2003, under great pressure from Australia. It was implemented (ratified) by Australia's parliament on 29 March 2004. Since earlier that month, Timor-Leste Prime Minister Mari Alkatiri has maintained that Australia has reneged on its commitment to approach the boundary issue in good faith, and that his Parliament will not ratify the IUA under these circumstances.

[5] One example of their ongoing campaign is "Woodside warns on Timor delay" *(Melbourne Age,* 8 June 2004): "Woodside Petroleum might have to defer its Sunrise gas project for at least five years - costing it billions in delayed revenue - if the impasse over Timor Sea production rights was not resolved by Christmas, the company warned yesterday. ..."

Shell's pressure to select a floating development process is demonstrated by "Greater Sunrise stands to lose if floating LNG plan sinks" *(OGN Online*, 21-27 June 2004): "Shell Australia has said potential lucrative North American customers for the Greater Sunrise gasfield in the Timor Sea would be lost if the venture did not commit to a floating LNG project by October. …"

In late July, the Australian government threatened to postpone boundary talks because of statements by Australia's Labor party leader, making Timor-Leste's future vulnerable to internal Australian squabbles. Woodside intervened in the public debate to support Canberra, threatening to delay or cancel Sunrise if Australia and Timor-Leste do not settle the boundary quickly. This incident demonstrates the willingness of Australian politicians to use Sunrise as a domestic political football -- how much more appropriate it would be for Timor-Leste to advocate for the interests of its own people.

the other hand, if Woodside's proposed timetable for starting Sunrise production in 2009 (at the same time as Bayu-Undan Phase II) is met, Timor-Leste will experience more than a decade of oil revenues far in excess of its ability to utilize them effectively, and the new nation's oil and gas birthright will be used up nearly a generation earlier than it need be.[6]

Reasons to wait

1. Permanent maritime boundaries have not yet been established.

At the present time, Australia is preventing a fair legal or negotiated settlement of a permanent maritime boundary with its new neighbor to the north. During the April 2004 round of bilateral maritime boundary negotiations, Australia made it clear that the lateral boundaries, i.e. the ownership of 80% of Greater Sunrise, are non-negotiable.

The current government in Canberra, led by Prime Minister John Howard and Foreign Minister Alexander Downer, is hell-bent to continue Australia's occupation and exploitation of Timor-Leste's maritime resources, depleting them as rapidly as possible before a permanent boundary is in place. From Australia's avaricious perspective this makes sense, as it is set to receive 81.91% of Greater Sunrise revenues under the proposed interim Timor Sea Treaty/IUA regime.

Removing the time pressure will provide space for Australian citizens to restore their government to good global citizenship, either by lobbying or through the electoral process. It will also shift the timeframe of Sunrise production, so that most of it would extend beyond 2033, the maximum duration of the interim Timor Sea Treaty, providing additional incentive to Australia to agree to a boundary between sovereign states, thereby providing security for oil company investments.

2. Technology will have improved, allowing Sunrise development to be less expensive, environmentally safer, and more reliable.

Floating LNG and deep water pipelines will have been done elsewhere, and Timor-Leste will not have to bear the risks and the costs of untested technology.[7] Timor-Leste gains nothing from subsidizing Shell's FLNG research and development expenses, or by paying for state-of-the-art deep water pipeline technology. If the Timor Sea [i.e. Greater Sunrise] is not available to them, Shell and other oil companies will experiment with these techniques over the next decade somewhere else, and Timor-Leste will share the benefits.

In addition to enhancing Timor-Leste's revenue by lowering capital and investment costs, better-tested technology will improve the reliability of production and reduce the risks of local environmental damage. It will also reduce the costs and risks of a deep-water pipeline from Sunrise to Timor-Leste.

Sequential development will extend the flow of gas from Timor-Leste's resources for at least a decade. If Timor-Leste's domestic electricity supply has been changed from expensive, imported diesel fuel, some Sunrise gas could be used to generate electricity for domestic needs, thereby reducing costs and providing energy sovereignty.

---

6 Once production starts, Woodside and others expect Sunrise gas to be entirely extracted in 30-40 years. As far as is known, Timor-Leste will never have another petroleum resource of comparable value.

7 Under the terms of the Production-Sharing Contracts (PSC) between the Timor Sea Designated Authority (TSDA) and the Bayu-Undan joint venture, the oil companies are entitled to recover all their capital and operating costs, plus 127% return on capital investment. (See Sections 6.7(c) and 7.10 of the 2 April 2003 PSC for JPDA 03-13, for example.) This money is effectively subtracted from revenues paid to the governments, so that the companies' profits increase if their costs are higher (by experimenting with new technology, for example), but Timor-Leste loses revenue. PSCs for Greater Sunrise have not yet been signed, but they may be similar in this respect to those for Bayu-Undan.

3. The sales value of the gas, being a non-renewable resource, will be higher.

Over the past few decades, natural gas has been transformed from a flared-off waste product to an important source of fuel. Over the next few decades, it will also become a significant raw material for the energy and petrochemical industries, through gas-to-liquids technology now in its infancy. This will increase its value on the world market. Leaving Timor-Leste's natural gas resource in the ground until it is needed is both a safe and a profitable way to manage this national entitlement.

Appendix II describes natural gas prices since 1970 and projections until 2025. Although prices fluctuate, the overall trend is upwards. Projections for the future are not certain, but these figures indicate that if Sunrise production were delayed from 2010 to 2021, for example, the selling price of gas would have increased by 25%.

4. Timor-Leste's government needs time to develop its regulations and civil service, and to gain experience managing petroleum development and revenues. After a few years, the danger of corruption or mismanagement will be significantly less.

Around the world, it is difficult to find a single case where petroleum revenues have benefited the people of a country which wasn't already rich before oil money came in.[8] Mismanagement, corruption, exploitation and bad development decisions are pervasive in many countries, resulting in a "resource curse." The "paradox of plenty" has plagued virtually every petroleum-dependent country – the people are worse off than they would have been if oil had never been found. If Timor-Leste is to avoid this pattern, it needs to fully absorb the lessons from others' experiences and mistakes.

As a brand new nation, Timor-Leste has no tradition of professional civil service, responsible money management, government integrity, or efficient procedures. Many practices are inherited from corrupt Indonesian or inefficient Portuguese bureaucracies; new regulations are being written hastily as they are needed. For the next few years, many mistakes will understandably be made, corrected and learned from.

Managing billions of dollars in oil revenues for future generations is challenging for any government. Timor-Leste may become an exception to the "resource curse," but the chances are much improved with an experienced government and tested civil infrastructure.

A decade from now Timor-Leste's government will have established internationally-accepted patterns of governance, integrity, transparency, accountability and rule of law. Civil society, the media, and elected officials of all political parties will also be more experienced and skilled at constructive monitoring and preventing possible abuses of government authority.

Timor-Leste's government is currently using a temporary, unclear method for putting oil money from Elang-Kakatua and Bayu-Undan into reserve, as no reserve fund or expenditure policies have been officially established. After the regulations are written for the fund, it will take time for bugs to be worked out and for the main stakeholders – the citizens of Timor-Leste – to understand and feel ownership of the process. Since Sunrise revenues will provide the bulk of the fund's money, it would be best if those revenues arrived after the fund was solidly in place.

---

[8] This has been written about extensively over the past decade. For one discussion specific to Timor-Leste, see "Can Timor-Leste Avoid the Resource Curse?" by Charles Scheiner, available online at www.etan.org/lh/misc/04curse.htm, from the author (see note 1), or on La'o Hamutuk's OilWeb CD-ROM.

5. **Timor-Leste will have a generation-long record as a peaceful, democratic, stable nation. This will reduce perceptions of political risk by oil companies, removing the need for Timor-Leste to make concessions in negotiations.**

During the Indonesian occupation of Timor-Leste, oil companies (and Australia) got especially generous deals from Indonesia in return for sanctioning the illegal occupation and assuming political risk. Timor-Leste, as a new country with a tragically violent history, has not had time to establish an investment-friendly reputation of peace, stability, and adherence to the rule of law. As a result, oil companies are wary of relying on on-shore facilities or Timor-Leste regulations.

But if contracts for Greater Sunrise are not signed for a decade or more, the new nation will have established its reputation, and will not need to make concessions to entice oil companies here, or to build pipelines or on-shore processing facilities in Timor-Leste.

6. **Global environmental consequences will be more manageable.**

If current worldwide exploitation of fossil fuels continues unabated, the ecosystem of the earth will undergo major changes, with devastating effects for human civilization. Scientific analysis has proven that carbon released into the atmosphere by burning coal, oil and gas is changing the global climate in ways which may soon become irreversible. Governments of industrialized countries – especially Australia, the United States, and Russia – continue to pursue risky energy policies in defiance of well-established science, but Timor-Leste need not follow their example. We would do better to listen to our Pacific Island colleagues, who are among the first victims of global warning and are leading the international community on this issue.

By developing Sunrise sequentially, Timor-Leste allows time for awareness, technology and political measures for dealing with global climate change to improve, therefore being a more responsible global citizen.

Conclusion

The author cannot think of any advantages to Timor-Leste in surrendering to Woodside's and Australia's insistence on simultaneous development of Bayu-Undan and Greater Sunrise. But decision-makers and advisors in Timor-Leste's government may find it difficult to prioritize long-term benefits over short-term action. If Sunrise is developed later, different people will be responsible for managing it, and nobody likes to give up authority. In addition, politics will have to give way to statesmanship.

The people of Timor-Leste waited five centuries and struggled for 25 years for the right to make their own decisions. They should make those decisions wisely, considering generations of their own people far into the future. Deferring development of the Sunrise field until it is needed would be one such wise decision.

Appendix I: Bayu-Undan revenue and Timor-Leste's needs

Projecting future oil revenues is an inexact science. For example, the RDTL Ministry of Planning and Finance (MOPF) estimates a range of $50-$280 million for Bayu-Undan revenues over the next four years.[9] But estimates are necessary, and the same document uses information from ConocoPhillips to estimate the income to the RDTL government over the life of the Bayu-Undan project, shown as blue solid bars in the graph below.[10]

I have not found published long-term projections of revenues required for the RDTL government budget (Consolidated Fund for East Timor, CFET), or of how much oil revenue will be needed. Over the next five years, the government plans to spend about $80 million per year, of which non-oil, non-donor revenues will provide about $26 million. Between 2006-07 and 2007-08, the MOPF projects a 2.8% annual increase in government expenditures, and non-oil domestic revenues are projected to increase 6.4%, as shown in the following table from the RDTL budget.[11]

Table 2.2
CFET Budget 2003-04 to 2007-08 ($m)

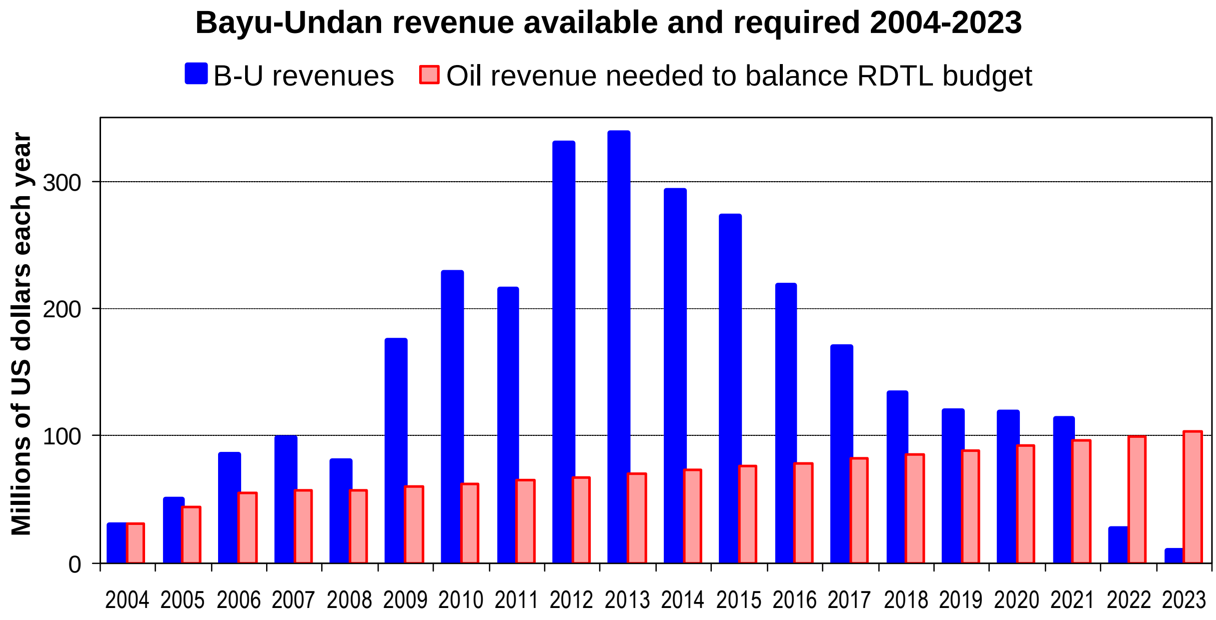
	2003-04	2004-05	2005-06	2006-07	2007-08	4 Yr Total
Revenue	**57.4**	**67.1**	**86.4**	**110.7**	**103.9**	**368.1**
Domestic Revenues	26.1	23.0	23.8	25.0	26.6	98.4
Timor Sea Revenues	31.3	44.1	62.6	85.7	77.3	269.7
Tax Revenues	26.7	18.3	35.2	56.4	47.7	157.6
FTP Royalties & Interest	4.6	25.8	27.4	29.3	29.6	112.1
FTP	4.5	25.5	26.1	26.9	25.9	104.4
Interest	0.1	0.3	1.3	2.4	3.7	7.7
CFET Expenditures	**74.6**	**75.1**	**78.9**	**81.9**	**84.2**	**320.1**
Salary and Wages	26.1	28.2	28.9	29.5	30.0	116.6
Goods and Services	38.2	36.8	37.8	39.6	40.4	154.6
Minor Capital	3.4	1.7	2.9	2.7	2.8	10.2
Capital Development	7.0	8.4	9.3	10.1	10.9	38.7
Overall Balance (-deficit)	**-17.2**	**-8.0**	**7.5**	**28.8**	**19.7**	**48.0**

To project further into the future, let's assume 4% annual growth in CFET expenditures, which is the average projected by MOPF over the years 2004-2008 (although they project the rate of increase to lessen each year). Domestic revenues are assumed to also grow at 4% per year, conservatively less than the 5.2% projected for 2004-2008 by the MOPF. To avoid deficits and borrowing, the difference between expenditures and domestic revenues must come from oil revenues, as shown in the red bars in the graph on the next page.

[9] *RDTL Combined Sources Budget 2004-5*, Background Paper for the May 2004 Development Partners Meeting, prepared by Ministry of Planning and Finance (MOPF), RDTL. Table 6.3, page 32. This extremely wide range illustrates the uncertainty in projecting petroleum revenues for even a few years.

[10] Ibid. Table 6.7, page 39.

[11] Ibid. Table 2.2, page 8. This refers only to the CFET budget, excluding TFET, bilateral, and UN sources of income, which are not sustainable over the long period. "FTP" refers to First Tranche Petroleum, a percentage of oil and gas sales paid off the top to governments. For this discussion, all non-Sunrise Timor Sea oil and gas field revenues are considered together.



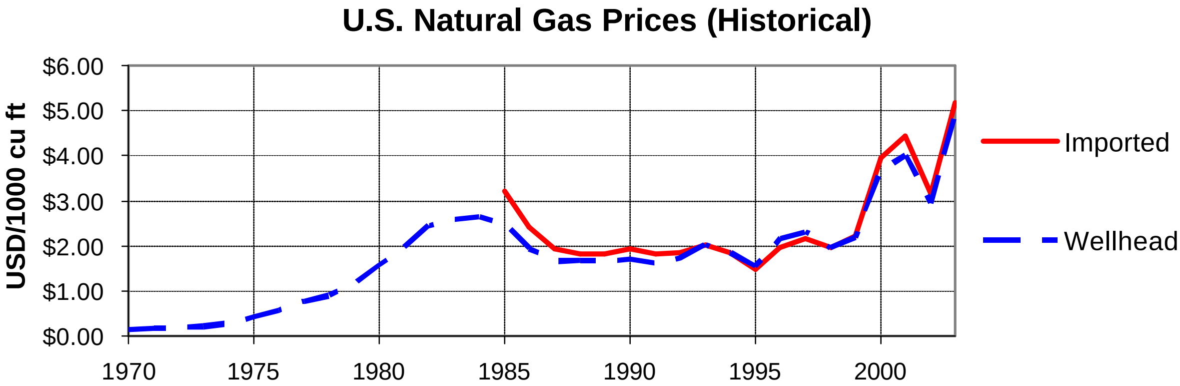
As the graph demonstrates, Bayu-Undan annual revenue will be more then enough to meet each year's government budget from 2005 through 2021. In fact, with the two 4% assumptions described above, the government will be able to put $1.8 billion of Bayu-Undan revenues into a reserve fund by 2021.[12] This analysis is fairly robust; changes in the assumptions of budget and non-oil revenue annual increases do not change this graph significantly. If ConocoPhillips' projections of Bayu-Undan revenue are reasonably close, that field alone will meet Timor-Leste's revenue needs until 2021 without having to utilize reserves accumulated during its peak production years.[13] (Elang-Kakatua, which has provided some revenue to Timor-Leste during the last three years, is nearing the end of its productive life and has no significant impact on these figures.)

[12] The reserve fund will actually be significantly larger by 2021, as it would have been earning interest. For the purposes of this discussion, that interest is not used for government expenditures. This differs from current interim policy of spending taxes and interest on government activities while placing current oil revenues (FTP) into reserve, but for the purposes of this discussion, that makes no difference.

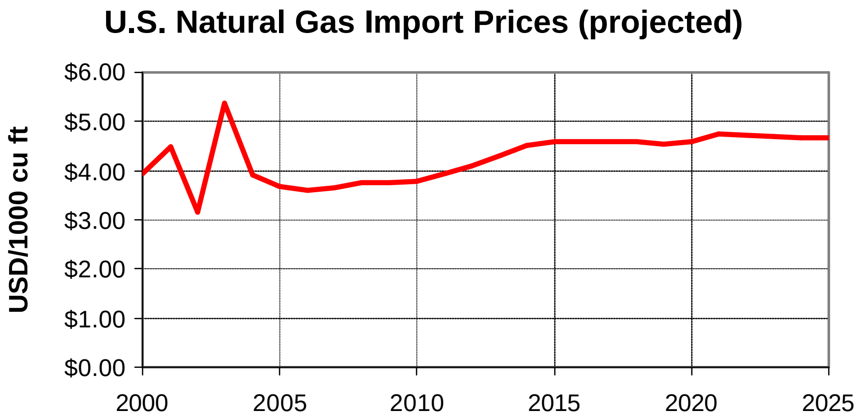
[13] Many of the points discussed in this paper would also support delaying Bayu-Undan Phase II (LNG pipeline to Australia and Darwin liquification plant) a few years, but as construction for that project has already been started, it would be hindsight.

Appendix II: Natural Gas prices and forecasts

Gas prices fluctuate, but the overall trend is up. The first graph[14] shows the average selling price of natural gas at the wellhead in the United States since 1970 (blue dashed line) and what U.S. utilities have paid for imported gas since 1985 (red solid line). Although the exact numbers would be slightly different for the Timor Sea, gas prices do not vary much around the world, and trends over time would be the same.



The second graph[15] shows U.S. government projections for imported gas prices over the next two decades, in constant 2002 dollars.



From this date, we can estimate that if full Sunrise production begins in 2021 instead of 2010, the inflation-adjusted selling price of gas will have increased by about 25%, from \$3.78 to \$4.74. This is slightly more conservative than the oil price projections used by Timor-Leste's government, which assume an increase of 2.5% per year after 2009 (31% over 11 years).[16]

[14] Source: *Natural Gas Navigator* (U.S. Department of Energy, Energy Information Administration) read at http://tonto.eia.doe.gov/dnav/ng/hist/n9190us3A.htm

[15] Source: Annual Energy Outlook 2004 with Projections to 2025 (U.S. Department of Energy, Energy Information Administration) downloaded from http://www.eia.doe.gov/oiaf/aeo/excel/aeotab_14.xls

[16] *RDTL Combined Sources Budget 2004-5*, Background Paper for the May 2004 Development Partners Meeting, prepared by Ministry of Planning and Finance Democratic Republic of Timor-Leste, page 36.