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**RATIFYING THE KYOTO PROTOCOL: THE CASE FOR JAPANESE–RUSSIAN  
JOINT IMPLEMENTATION**

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**J**udging by the potential impacts on the economy, the Kyoto Protocol must be seen as an instrument in Japanese strategic energy planning. This briefing paper argues that a switch in implementation policy away from (Article 3.4) carbon sinks towards joint implementation (JI) within the Russian energy sector would be at least cost-neutral, if not outright profitable. More importantly, it would enable the Protocol to enter into force, and deliver with it a key component in strategic Japanese energy policy: the flexible additional supply required for the successful liberalization of the Japanese natural gas market.

### Introduction

In direct reaction to President Bush's speedy reneging on a campaign pledge to set 'mandatory reduction targets' for carbon dioxide emissions from power generation (a mere 53 days into his presidency), Rainer Hinrichs-Rahlwes, Director General of the German Environment Ministry, admitted that 'maybe it will be necessary to ratify the Protocol without the US and to instead pave the way for them to join later'.<sup>1</sup> Since then, this sentiment has been rapidly gaining ground internationally, in particular after President Bush unilaterally declared the failure of the Kyoto Protocol. Indeed, at a meeting in Kiruna (Sweden) on 31 March 2001, EU environment ministers pledged to pursue ratification of the treaty with or without the United States. Environment minister Kjell Larsson, for the Swedish Presidency, stated that 'the Kyoto Protocol is alive, contrary to what has been said from the other side of the Atlantic. No individual country has the right to declare a multilateral agreement dead.'<sup>2</sup>

Assuming thus that the EU has the will to proceed with early entry into force of the Protocol in the current absence of meaningful US participation, the immediate question is whether there is also a way. The obvious answer is, of course, 'yes', since entry into force can be delivered by Europe, Japan and Russia (essentially) on their own. Indeed, in the light of Australian reservations,<sup>3</sup> this may well also be the only way.

### Japan

If the EU is willing to ratify early, then Japan becomes a linchpin in trying to save the treaty which saw the light of day under its patronage. According to Hiroshi Matsumura,<sup>4</sup> Japan's basic strategy has thus far been 'to construct a framework that would secure ratifica-

tion by the US' (p. 5). Sadly, this strategy has taken a severe battering since the backtracking by the United States.<sup>5</sup> At the Sixth Conference of the Parties (COP6) to the UN Framework Convention on Climate Change, held in The Hague in November 2000, Japan was clearly siding with a US demand for the inclusion of certain types of carbon sinks – envisaged, at least in principle, under Article 3.4 of the Protocol – a demand which led to a still unresolved conflict with the EU. In the present volatile state of affairs, it would be wise to try to understand the Japanese position.

Matsumura rightly points out that Japan has been known to diverge from the American line, typically when 'at COP5, Japan sided with the EU and played an active part in achieving a consensus that "the countries will endeavour to effectuate the Kyoto Protocol by 2002"' (p. 5). This commitment has to be taken seriously, since Japan is not known to renege on promises or official declarations of intent. Indeed, the fact that Japan keeps its promises is one of the key reasons why these promises are not made lightly and without careful consideration and preparatory analysis. Matsumura's account of this process in the run-up to the Kyoto conference is thus extremely useful in trying to understand the Japanese position at The Hague.

### *Decimal points and other enigmas*

The story of the Japanese Annex B target began as a tussle between the Ministry of International Trade and Industry (MITI) and the Environment Agency of Japan (EAJ), which independently developed CO<sub>2</sub> emission scenarios that estimated feasible 2010 targets. MITI's scenario was a return to 1990 levels, and the EAJ's a reduction to –7.6 per cent below 1990. In September 1997, consultation between the EAJ and MITI began to coordinate the Japanese position on mitigation targets for the third annual session of the COP, scheduled to be held in Kyoto that December. The Ministry of Foreign Affairs joined forces with the EAJ and insisted that a position of around –5 per cent was essential for the host country to be in a position to mediate between the protagonists – in particular the EU (–15 per cent) and the US (0 per cent). MITI, in turn, was only willing to concede a reduction target of –0.5 per cent (for methane and nitrous oxide). 'Finally the chief cabinet secretary was forced to intervene in late September. The matter was settled politically, with the compromise figure of –2.5 per cent set as the target for Japan.' (p. 17).

Thus far there does not seem to be much out of the extraordinary in this process. After all, ministries are known the world over to disagree until a last-minute political compromise is imposed. What is slightly less common is the way this compromise was presented to the rest of the world, namely in terms of a 'formula of

<sup>5</sup> Eric Pianin, *Washington Post*, 28 March 2001, p. A01: 'The White House recently sought advice from the State Department about how the United States can legally withdraw its signature from a landmark 1997 global warming agreement, signalling its intent to pull out despite efforts by European and Japanese leaders to try to keep the agreement alive, an administration source said yesterday.'

<sup>1</sup> Reuters, 15 March 2001.

<sup>2</sup> Anthony Browne, *The Observer*, 1 April 2001.

<sup>3</sup> Annabel Crabb, 'PM to dump Kyoto deal', *The Age*, Melbourne, 2 April 2001.

<sup>4</sup> This section draws extensively on Hiroshi Matsumura, *Japan and the Kyoto Protocol: Conditions for Ratification* (London: Royal Institute of International Affairs, 2000). The author wrote the study during a secondment to RIIA from the Japanese External Trade Organization (JETRO). Page numbers in this section of the text refer to this work.

**Box 1: The evolution of the Japanese mitigation master plan**

Target from 1990 level (%)	Measure/sector responsible
0.0	Energy CO <sub>2</sub> (MITI)
-0.5	CH <sub>4</sub> and N <sub>2</sub> O (MITI)
-2.0	Technological innovation (EAJ)
<hr/>	
-2.5	
+2.0	Basket expansion
<hr/>	
-0.5	
-0.3	3.3 Sinks
-3.4	3.4 Sinks
-1.8	Flexibility
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-6.0	Kyoto target

Source: Matsumura, *Japan and the Kyoto Protocol: Conditions for Ratification* (p. 21).

*The need for flexibility*

No doubt there are advantages in this sort of sequential, step-by-step implementation planning. And yet it does involve the danger of becoming too rigidly wedded to these measures when confronted with unforeseen situations. The best-known instance of this sort of situation is of course when circumstances are such that – contrary to plan – the chosen measures have to be augmented by ‘additional measures’ if the target is to be achieved. Matsumura himself discusses such additional measures in some detail.

MITI’s key contribution to the master plan was a collection of ‘all sorts of energy conservation measures’, projecting ‘a fantasy future ... in which the rate of increase in total energy demand would be kept at nearly zero for 13 years while the economy would grow at an annual rate of 2 per cent’ (p. 12) in order to reduce emissions to 1990 levels. Matsumura thus clearly does not think the master plan can achieve its first aim – the return to 1990 levels through reducing energy-related CO<sub>2</sub> emissions – without additional measures. He considers different options, ranging from the introduction of a carbon tax to domestic emission trading, renewable energy and natural gas.

*The case of natural gas*

Because supply from outside the Middle East (Brunei, Indonesia) was judged to be sufficiently secure, Japanese imports of liquefied natural gas (LNG) expanded rapidly from 1.5 per cent of total energy supply (1979) to 10 per cent in 1990. However, the same security of supply concerns had adverse effects on the price differential with coal. While the UK price differential between natural gas and steam coal for electricity generation, for example, remained fairly stable between 1993 and 1998 at around \$40/toe, the Japanese figures rose sharply from around \$30 to \$125/toe (p. 52).

The effect of this has been that deregulation in Japan has led not to a ‘dash for gas’ but to a slightly less rushed ‘stroll for coal’. No matter how leisurely the pace, however, this trend is clearly not good news for the master plan. Matsumura considers two potential remedies: supply via pipelines from abroad, and increasing the pace of liberalization of the electricity and gas markets. Matsumura clearly favours the latter: ‘If the government can avoid placing too much emphasis on security issues and, through deregulation, reduce the price of natural gas ... there will emerge an energy market which manages to reconcile economic and environmental needs’ (p. 61). Ali

differentiation, based on emissions per GDP, emissions per capita and population growth. According to this skilful formula, the reduction ratio for Japan was –2.5 per cent.’ (p. 17).<sup>6</sup> In the end, the EU gave up its resistance to differentiation and the high-level delegates at Kyoto decided on a one per cent graduation for the main players: Japan (–6 per cent), the US (–7 per cent), and the EU (–8 per cent).

*The master plan*

Understanding the current Japanese position, however, requires more than just a knowledge of the evolution of the Japanese target. Of equal importance must be the manner in which these fluctuations were reflected in the ‘master plan’ for achieving the target. The initial –2.5 per cent compromise was to be achieved by combining MITI’s –0.5 per cent (return to 1990 through energy CO<sub>2</sub>, and an additional –0.5 per cent through CH<sub>4</sub> and N<sub>2</sub>O measures (see Box 1), with an assumption that the remaining –2 per cent would be covered by the EAJ’s technological innovation projection.

The first blow to this scenario was the effect of ‘flexibility’. The expansion of the basket of greenhouse gases at Kyoto from three to six – usually seen as helping the

<sup>6</sup> This type of ‘calibration’ is, of course, commonplace in economic modelling, but it would seem to have slightly less legitimacy in the context of systematic allocation of assigned amounts. This is all the more true if Matsumura is right in his observation that ‘the standard reduction ratio of this Japanese formula of –5 per cent had significant implications for participating countries .... It was seen as a message from the host country for parties with the idea of differentiation to gather round this figure, which lay between that of the US and that of the EU at the time.’ (pp. 17–18).

Parties by introducing greater ‘flexibility’ to the regime – actually added two percentage points to what the Japanese felt they could achieve by 2010, leaving them with a projected level of –0.5 per cent. And this is the beginning of the Sink Saga – or the ‘Article 3.3–3.4’ Saga to those fluent in Kyotoprotocolese. Under the provisions of the narrow interpretation of ‘sink’ (Art. 3.3), calculations by the Japanese Forestry Agency (JFA) estimated that such activities could remove no more than an additional –0.3 per cent from Japanese 2010 emissions. However, if this definition were extended to cover ‘high-level forest maintenance and management activities’ (as carried out in national forests), then altogether sinks would be able to achieve more than ten times this reduction (–3.7 per cent). The only place where these additional credits could possibly be obtained was through Article 3.4, which dealt with the potential revision of this narrow definition concerning the commitments after the Kyoto period.<sup>7</sup> At the final meeting of the ‘Committee of the Whole’ at Kyoto, Japan – supported by the US and the EU – managed to modify this article by adding that ‘a Party may choose to apply such a decision on these additional human-induced activities for its first commitment period, provided that these activities have taken place since 1990’. Following the JFA’s estimate, this addendum was assumed to deliver a further –3.4 per cent reduction. This left the projected deficit with regard to the –6 per cent Kyoto target at –1.8 per cent, which in turn was budgeted to be covered by the flexibility mechanisms.

<sup>7</sup> Note that such a revision is meant to happen only after the Protocol has come into force.

Aïssaoui of the Oxford Institute for Energy Studies, however, reverses the emphasis, asserting (in a private communication) that the price of gas supplied to Japan will decrease not primarily as a result of domestic liberalization, but as a result of forced competition between external suppliers.

The point, of course, is that the two remedies are not mutually exclusive. Indeed, it could be argued that construction of an overseas pipeline could help to overcome the sort of security worries that Matsumura considers to be a key impediment to liberalization. In May 1997, MITI announced that Japan was again considering a pipeline between the Japanese mainland and the Russian gas fields on and off the island of Sakhalin. And the same is true of the LNG projects in the Russian Far East (Sakhalin). However, both these options are fraught with political difficulties arising from a long-standing territorial dispute between the two countries (see below).

#### *Flexibility cost benchmark*

Apart from a willingness to contemplate additional measures when required, there is a second type of flexibility which may need to be applied, namely the flexibility to abandon chosen measures if necessary (in particular measures which may threaten to scuttle the whole deal). Having said this, it needs to be emphasized that in the light of European support for the Japanese amendment to Article 3.4 at Kyoto, the Japanese might not unreasonably feel somewhat resentful about the EU's refusal to admit such measures at The Hague. And yet, given what is at stake (and the domestic political situation in the EU), Japan might be persuaded to replace Article 3.4 sinks in its implementation planning if a feasible alternative existed. But are there such alternatives? Given the kind of measures already incorporated in the plan, what springs to mind first is an additional use of Kyoto flexibilities.

Consider, in the first instance, the 'simplest' of these mechanisms, international emissions trading. According to Matsumura, 'the purchase price for emissions to meet the -6 per cent target ... would be \$1.8bn' (p. 44).<sup>8</sup> Naturally, no one would wish Japan to go down this extreme route, but these figures provide a benchmark for the (maximum) annual flexibility costs of replacing the controversial '3.4 sinks' component (-3.4 per cent, 10.2MtCe, 37.4MtCO<sub>2</sub>e): \$306 million.

<sup>8</sup> Matsumura puts the Japanese 2010 reduction requirement from Business as Usual (BaU) at 60MtC (220MtCO<sub>2</sub>e) and assumes a permit price of \$30/tC.

This may still sound a rather large sum, but when translated into \$2.45 per head of population, or 0.004 per cent of estimated 2010 GDP, no one can reasonably argue that the Japanese economy would be crippled by these costs. Moreover, a recent OIES modelling study on the impacts of the Kyoto Protocol on global fossil fuel markets<sup>9</sup> has shown that under its original master plan, Japan would actually be better off to the tune of 0.2 per cent of real income (as measured by the Paasche Index). In short, if a switch away from 3.4 sinks to using Kyoto mechanisms is what it takes to deliver EU ratification, then a Japanese refusal would have to be classified as 'irrational' in the economic meaning of the term, for it would mean forgoing 0.196 per cent of economic growth (relative to the OIES estimates). As it happens, Japan may forgo much more than this if the Protocol does not come into force, but to see this it is necessary to examine more closely the climate change policies of another Annex I Party, the Russian Federation.

#### **Russia**

Arild Moe and Kristian Tangen provide a very timely and insightful picture of Russian climate politics.<sup>10</sup> Tellingly, their analysis is not entitled 'Conditions for Russian Ratification', for - unlike OECD countries - Russia can expect to derive significant immediate economic benefits when the Kyoto Protocol comes into force. Moe and Tangen instead focus their study on two related key questions: 'What will be Russia's piece of the quota market pie?' and 'Who are the actors?'

#### *Surplus permits versus joint implementation*

The fact that the start of the multilateral climate negotiations coincided with the onset of the economic turmoil after the collapse of the Soviet Union has created the somewhat anomalous situation that Russia and the other affected 'economies in transition' are most likely going to end up with emission levels considerably below their Kyoto target, even without implementing any explicit mitigation measures. Given

<sup>9</sup> Three-quarters of the models surveyed in U. Bartsch and B. Müller, *Fossil Fuels in a Changing Climate* (Oxford: Oxford University Press for Oxford Institute for Energy Studies, 2000), had a 2010 permit price of less than \$100/tC.

<sup>10</sup> This section draws extensively on Arild Moe and Kristian Tangen, *The Kyoto Mechanisms and Russian Climate Politics* (London: RIIA, 2000). Page numbers in this section of the text refer to this work.

the possibility of trading in permits ('assigned amount units'), the resulting surplus permits - sometimes slightly pejoratively referred to as 'hot air' - are a silver-lining windfall arising from a clearly unintended and unwelcome turn of events. It would be wrong to deny Russia these windfall assets just because they have not arisen from intentional policy measures. But it would be equally wrong for Russia to use the revenues in promoting 'business-as-usual' economic growth without restructuring the economy to reduce its over-inflated emission intensity. Under 'normal' circumstances, it would have taken a considerable improvement in the emission intensity of the economy to obtain such surplus quotas. If Russia manages to invest its surplus permit earnings in such a way as to retroactively emulate this 'normal' generation of surplus permits, then there could not be a genuine objection to a trade in these permits. As it is unlikely that such restructuring could be achieved without additional inward investments, one would have to be wary of proposals such as that apparently considered by the Clinton administration 'to use the sale of the quotas to offset Russia's debt to foreign countries' (p. 66).

According to Moe and Tangen, Russia's 'surplus quotas will meet between 35 per cent and 50 per cent of the total demand for quotas' (p. 45) - although domestic Russian sources, being more optimistic about an economic recovery, tend to predict a rather lower surplus permit level. Both the overall concentration of surplus permits in Russian (and Ukrainian) hands and the domestic economic predictions have tended to give rise to the view that surplus permits should be sold more sparingly than some other Annex I actors might like to see, for reasons of (monopolistic) income maximization, risk aversion and environmental protection.<sup>11</sup>

Indeed, if the two leading climate change officials in the Russian Ministry for Fuel and Energy turn out to be correct in their view that the sale of surplus quotas is to be conducted exclusively at central government level,<sup>12</sup> then there will be further pressures in the same direction from other actors such as regional administrations and the private sector. Without the ability to

<sup>11</sup> See, for example, A. Mastepanov, O. Pluzhnikov, V. Berdin (Russian Ministry for Fuel and Energy) and V. Gavrilov (Ministry of Economy and Trade), 'Outlooks and Prerequisites of the Kyoto Mechanisms Implementation', *Climate Policy* 1 (2001), p. 125.

<sup>12</sup> A.M. Mastepanov and O.B. Plyuzhnikov, 'Energetika posle Kioto', *Energeticheskaya Politika*, No. 6 (1998), p. 16.

engage in the sale of surplus permits, these actors have no alternative to focusing their attention on joint implementation, which does have a significant potential to benefit both. Their argument in favour of a limitation of surplus permit sales is the justified concern that a supply of large volumes of surplus permits would drive down the permit price below the viability level of most JI projects. Concluding that 'it seems certain that JI will be given a strong place in Russia's implementation policy' (p. 73), Moe and Tangen then turn their attention to which of the potential Russian actors will be primarily involved in such projects. Their answer is unequivocal: Gazprom, the huge Russian gas conglomerate.

### *Gazprom joint implementations*

To get an idea of the importance of this company to Russian JI activities, one only needs to remind oneself that Gazprom's current greenhouse gas emissions of 201MtCO<sub>2</sub>e<sup>13</sup> are four times larger than those of Norway, and of the same order of magnitude as the estimated overall Japanese reduction requirement (220MtCO<sub>2</sub>e, see above). Gazprom has furthermore recently been engaged in a JI pilot project with Ruhrgas, with some interesting consequences. The objective of the project was

to optimise network operation in the Uzhgorod corridor of the Volgotransgaz transmission system and thus minimise the carbon dioxide emissions. With the aid of simulation and optimisation software (SIMONE), the amount of energy needed to drive compressors is to be reduced. Using less fuel gas for the compressors results in fewer emissions. Simulation and optimisation occur in two steps: (i) simulation of optimum gas pipeline operation with a view to minimising fuel gas consumption, (ii) implementation of optimised operation methods in the actual network.<sup>14</sup>

Unfortunately, information about the costs to Ruhrgas does not seem to be publicly available, but they are unlikely to have been significant, particularly in relation to the annual fuel savings achieved which, according to Moe and Tangen, were 'worth some US\$7m if exported' (p. 100) – and probably a lot more under current export prices. Under JI, the foreign investor

<sup>13</sup> Leakages from production, high-pressure trunk pipelines and compressor stations: 114MtCO<sub>2</sub>e; fuel use at compressor stations on high pressure trunk pipelines: 87MtCO<sub>2</sub>e. In total they make up 10 and 75 per cent of the total of Russia and its gas sector, respectively.

<sup>14</sup> Source: [www.ruhrgas.de/englisch/Umwelt/index.htm](http://www.ruhrgas.de/englisch/Umwelt/index.htm)

would, of course, expect to make a net profit at least through obtaining the emission reduction units (ERUs) generated by the project. However, the Ruhrgas/Gazprom project demonstrates clearly that such projects can be profitable even without ERUs. Indeed, Ruhrgas could actually have partaken in these profits by way of a barter scheme explicitly devised for these sorts of conservation projects.<sup>15</sup>

Small wonder then that Ruhrgas and Gazprom have decided to extend the pipeline rationalization measures adopted in their pilot project to large parts of the system, with the aim of avoiding annual emissions of around 3.6MtCO<sub>2</sub>e (10 per cent of the Japanese '3.4 sink requirement') – and, presumably, of achieving annual fuel savings in the region of \$100m (export value). However, the main benefit of the project was not perceived to be these profits, but the improved relations between Ruhrgas and Gazprom after years of strain – a fact emphasized in a Ruhrgas press release (25 October 1999): 'This close cooperation creates an atmosphere of mutual trust and understanding which is indispensable for projects of this kind.' In short, the almost inevitable large benefits and the possibility of transferring them to the foreign investor in terms of ERUs and natural gas make these projects ideal vehicles for forging strategic industrial partnerships in this increasingly important energy sector.

### **Japan and Russia**

#### *The Kurile Islands dispute*

The thorn in Russian–Japanese relations ever since the final days of the Second World War has been a territorial dispute over the Kurile Islands (the 'Northern Territories'), arching from Hokkaido in the south to Kamchatka in the north.<sup>16</sup> This dispute has been detrimental to both parties' economic interests: it systematically thwarted Soviet plans to transform the neighbouring Sakhalin Island into a major hydrocarbon production centre (proposed as early as 1966), which would have provided

<sup>15</sup> According to Javier Estrada, Arild Moe and Kåre Dahl Martinsen in *The Development of European Gas Markets* (Chichester, UK: Wiley, 1995). 'Italian ENI has entered into a contract with Gazprom to refurbish certain parts of the pipeline system and the gas economized will be used as payments' (p. 270). 'A Government resolution from 5 April 1993 suggests that conserved gas could be exported to cover foreign investments in conservation' (p. 311).

<sup>16</sup> The dispute has proved intractable, although the heads of governments recently recognized the importance of trying to resolve it. See 'A small step forward in Irkutsk,' *The Japan Times*, 27 March 2001.

a significant opportunity for Japan to increase its all-important security of energy supply. At present, Russian–Japanese relations are still governed by the 1993 Tokyo Declaration – issued on the occasion of a state visit by President Yeltsin – which declared that the intention of both countries was to agree to continue negotiations on the Northern Territories in order to be able to conclude a peace treaty. The key problem is that the two parties do not seem to agree on how this intention is to be implemented: according to Japan the territorial negotiations must go hand in hand with any other exchanges promoting bilateral relations, while Russia regards talks about economic cooperation and national security as a prerequisite for creating favourable conditions for such negotiations.

#### *Russia and Japanese energy policy*

In his analysis of the Northeast Asian oil and gas markets,<sup>17</sup> Keun-Wook Paik provides an astute analysis of Japanese policy towards Russian hydrocarbons in the shadow of this conflict:

Japanese policy can be characterized as follows: first, Japan has rarely been slow to secure a bridgehead to [China's and Russia's] oil and gas areas because of their huge potential and geographical proximity. Secondly, Japan's commitment to both China's and the FSU's (Russia's) oil and gas development has been fundamentally influenced by power relations rather than development economics ...

The MFA [Ministry of Foreign Affairs], MITI and the MOF [Ministry of Finance], as well as the business community, are generally agreed that Japanese aid to the former Soviet republics should include only technical assistance, i.e. industrial and managerial know-how and emergency food and medical aid. Tokyo's reluctance to extend economic aid is based in part on its sober assessment of political uncertainties and the numerous obstacles to economic reform discussed above and, more importantly, on its disappointment with the lack of progress on the Northern Territories issue.

... However, Japan has begun to recognize the danger of losing its vested interests in Russian Far East oil and gas development to those major international oil companies that are pursuing opportunities in the Russian Far East, especially Sakhalin offshore. Consequently its financial support for RFE, especially Sakhalin

<sup>17</sup> Keun-Wook Paik, *Gas and Oil in Northeast Asia* (London: RIIA, 1995), pp. 173, 176.

offshore, oil and gas development ... seems to be less confined by the long-standing territorial dispute.

In short, while there is still a marked difference in Japanese financial support for the hydrocarbon sectors in China and Russia, largely because of the lingering Northern Territories dispute, there are signs of a pragmatic shift towards *Sekei Bunri* (separation of politics from economics), so that Russian oil and, particularly, gas may become more acceptable to Japan.

### *MITI–Gazprom relations*

In his detailed analysis of current Japanese fossil fuel policies towards Russia, Paik describes an interesting implementation case study involving MITI and several steel manufacturing and trading companies on the Japanese side, and Russia's Gazprom:

In March 1993 MITI provided \$0.3 billion worth of insurance covering 350,000 tonnes of steel pipes and construction machinery for Gazprom. This constituted the first portion of the \$1.8-billion trade insurance promised in October 1991. In the same month, a trade-insurance application for another \$0.4 billion to cover 0.3 mt of steel pipe and construction machinery for Gazprom was submitted, but not fully implemented. The credit-based business negotiation between Gazprom and four Japanese steelmakers was settled in September 1994, with the Japanese price discount for steel pipes at 2–3%, and the following month negotiations for another 203,000 tonnes of steel pipes began. Consequently, the promised trade insurance for Gazprom will not be realized until after the credit-based contract is accomplished. The delay is caused by Russia's failure to pay debts of \$330 million to nine Japanese trading companies.<sup>18</sup>

In the light of the last sentence, it stands to reason that this project may not have resulted in a warm glow between the Japanese and Russian partners. Indeed, it was probably counter-productive if its aim was to foster closer trade partnerships.

### *The solution*

Recalling our earlier example of an apparently much more successful collaborative enterprise with Gazprom, it is likely that the failure of the MITI collaboration might have been avoidable if the project had been carried out under the joint implementation mechanism. Or, to be more precise,

<sup>18</sup> *Ibid.*, p. 175.

Gazprom JI projects would be much less vulnerable to this sort of debt dispute simply because they involve payment in terms of emission reduction units and (possibly) barter deals.<sup>19</sup> Indeed, if companies such as Gazprom were to receive certain quantities of Russia's surplus permits, then it might even be possible to settle earlier bad debts with assigned amount units.

The success of such collaborative efforts, in turn, may well pave the way to removing one of the biggest obstacles to a successful liberalization of the Japanese natural gas market along the lines of the UK 'dash for gas': the relative inflexibility of supply through long-term 'take-or-pay' LNG contracts.<sup>20</sup> There are two obvious ways in which this obstacle could be overcome: (i) by constructing natural gas supply pipelines,<sup>21</sup> and/or (ii) by switching in time to more flexible LNG suppliers. As mentioned before, the first of these options is being actively pursued in the context of Sakhalin gas, which – in the not too distant future<sup>22</sup> – might also provide opportunities for the second option, since according to Moe and Tangen 'Russian gas sellers have become more flexible, offering gas on shorter-term contracts' (p. 93), although both options have to be seen in the light of the fact that Russian companies do not have a large share in the Sakhalin natural gas projects.

To the seasoned observer of Russian–Japanese trade relations, all this may look like a case of putting the cart before the horse. Indeed, Akira Miyamoto, a leading expert on Japanese natural gas issues, point-

<sup>19</sup> In the case of Japanese JI investors – unlike Ruhrgas, which is actually connected to the Gazprom pipeline system – such barter deals would have to involve some sort of swap, e.g. with the producing companies in the Russian Far East.

<sup>20</sup> 'Because Japan does not have international pipelines linked to producing areas, it depends on LNG as the only means of transportation for importing natural gas. Therefore, once a long-term contract is signed, Japan is bound by its take-or-pay article and is unable to modify the quantitative and price terms or to switch to other sources. The electricity companies are tied down by their existing contracts until these can be revised, between 2003 and 2005.' (Matsumura, p. 53).

<sup>21</sup> Indeed, MITI's Natural Gas Policy Council will shortly be recommending a financial contribution by the government towards the construction of the pipeline from Sakhalin (personal communication, Keun-Wook Paik).

<sup>22</sup> Again, international consortia – with substantial Japanese private-sector involvement – are waiting for the bilateral climate to thaw in order to develop at least two major LNG liquefaction plants and terminals (imaginatively known as 'Sakhalin I' and 'Sakhalin II').

ed out in a private communication three reasons for the current stagnation in Japanese private-sector investment in Russia: 'first, uncertainty of investment climate (Japanese private companies do not like to take risks in general, or cannot take exploration risks as they are too small); secondly, a psychological impediment arising from political matters; thirdly, the Japanese government does not show a clear "go ahead" sign to private companies although it is thought to be very effective for Japan's long-term energy security.' In short, without government encouragement, there will be no Japanese private-sector investments in Russia, and since the former appears to be unlikely in the absence of a thaw in the Northern Territories dispute, it may well seem as if the solution proposed above has got its sequence 'the wrong way round'.

However, this impression is misleading. First of all, owing to the restricted specific nature of JI projects, Japanese government agencies may well feel able to endorse them without the fear of creating the impression that they are caving in on their interpretation of the Tokyo Declaration: JI projects can easily be interpreted as 'environmental assistance', on a par with the technical assistance generally agreed as being acceptable (see Paik, p. 176, quoted above). The importance of the natural gas sector in domestic Russian policy may in turn lead the Russian side to conclude that successful JI projects with Japan are sufficiently important to Russia to bring about the sort of favourable conditions that the Russian side regards as a prerequisite to the territorial negotiations.

What must be remembered and emphasized here is that all the issues raised in this section are driven not by environmental but by strategic energy and foreign policy considerations. And the solutions proposed in terms of engaging under joint implementation are solutions to energy concerns, concerns which exist quite independently of climate change problems. The solutions, of course, remain in the realm of fantasy without the (Annex I) Kyoto mechanisms, which is why the Kyoto Protocol has the very real potential to contribute significantly towards one of the key strategic objectives in Japanese economic planning: the security of fossil fuel supply.

### *Flexible implementation*

In other words, the primary role of the Kyoto Protocol for Japan should be seen as that of an *energy policy instrument*, albeit with certain mitigation obligations as an 'ancillary drawback'. Of course, the instru-

ment will not be available to Japanese policy-makers – or anyone else, given the current international situation – if Japan is unable to ratify the Protocol because it fails to be satisfied that it could comply with these obligations, in particular if asked to abandon its reliance on 3.4 sinks. This, of course, brings us back to the Japanese master implementation plan. The fact that Japan did sign the Protocol presumably means that (at the time) it was felt to be feasible in its current configuration with the 3.4 sinks budget. While some additional measures may now be felt to be necessary, Japanese policy-makers might still not be swayed by the idea of replacing the 3.4 sink option with the JI measures proposed here. And, as mentioned above, the reason for this might be doubts not about the suggested economic benefits, but about whether such a switch could actually deliver the budgeted –3.4 per cent emission reductions. In short, the doubts might be about the required security of ERU supply.

According to Moe and Tangen, ‘Compared with other major energy companies such as Shell and BPAmoco, Gazprom has taken few initiatives to gain experience in the field of emissions trading and joint implementation.’ (p. 99). Thus there is still room for new entrants to collaborate with the major single source of ERUs in the Russian Federation, provided, of course, that the Russian Federation manages to introduce the legislation and administration required for a functioning joint implementation programme.

### Summary

Provided the Russian Federation can put into place the necessary legislative and administrative measures and institutions, a

switch from 3.4 sinks to JI with the Russian gas sector in the Japanese plan to implement the Kyoto mitigation target may well be ‘rational’ in any sense of the word:

- It is feasible:

- (i) There are enough ERUs to be collected from within the Russian natural gas sector to satisfy the budgeted 3.4 sink reductions many times over.

- (ii) The potential costs involved – if there are any at all<sup>23</sup> – are insignificant relative to the potential benefits.

- In the medium to long term, it may provide Japan with one of the key measures (a ‘dash for gas’ under a truly liberalized gas market) which could be required in addition to the ones envisaged in the master plan to fulfil its Kyoto obligation (in particular MITI’s CO<sub>2</sub> reduction plans), thus enabling Japan to ratify, and hence deliver the early entry into force of the Protocol.

- The Protocol, once in force, may provide the key to overcoming the obstacles to establishing strategic alliances between the Japanese and Russian energy sectors which are trying to move away from their historically strained political relations. Apart from enabling the ‘dash for gas’, this would be a major contribution towards the key aim in Japanese policy: the security of energy supply.

### Dual track versus dead end

To end on a slightly more general note: the current crisis situation warrants a caveat concerning certain misguided objections to

<sup>23</sup> Given that many of the projects might be undertaken for energy security reasons quite independent of implementing the Protocol, attributing their full cost – if any (viz. the Ruhrgas example) – to the implementation aspect would not be justifiable.

the ‘early entry into force’ scenario mentioned in the introductory paragraph. The fact that the current US administration fails to see the merits of the Kyoto Protocol simply means that it is not likely to participate in the ‘environmental leadership’ scenario. Not more and not less. In particular, it does *not* mean that the US should not or even cannot implement domestic mitigation measures on a voluntary basis. Nor does it mean that entry into force of the Protocol would somehow forbid it or prevent it happening. The regrettable dereliction of responsibilities by the current US administration suggests we may be heading – at least temporarily – for a ‘dual track’ regime: some as yet unknown regime for the US, and the Kyoto Protocol for the rest of the world. While this may not seem ideal to supporters of the Protocol, one should be very careful not to call for a stop to the Kyoto track merely to retain at all costs the simplicity of a one-track world – in particular if the track happens to be a dead end.

This should ring all the more true considering a very recent study by Prof. Yuzuru Matsuoka of Kyoto University according to which ‘the economic growth of Japan and Europe is highly likely to surpass that of the United States if the former two adhere to the 1997 Kyoto Protocol ... while Washington rejects it.’<sup>24</sup> One must therefore hope that the Japanese government will pay as much heed to the resolution unanimously adopted by its Upper House on achieving an international agreement to ratify the Kyoto Protocol as the current American administration does to non-binding resolutions of its Senate.

<sup>24</sup> *Yomiuri Shimbun*, 22 April 2001, [www.yomiuri.co.jp/newse/20010422wo71.htm](http://www.yomiuri.co.jp/newse/20010422wo71.htm)

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