The Sakhalin-II Project: The Strategic Energy Partnership with Japan for the 21st century.

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IEEJ Tokyo 13 December 2004
“Russia is also prepared to make its contribution to creating a new energy configuration in the Asian and Pacific Region. For example, in 2007 it is planned to open a factory for liquifying natural gas on Sakhalin – one of the largest (LNG) factories in the world.”

President Vladimir Putin
Definition of Strategic Partnership
(Oxford Dictionary)

• **Strategic adjective** [usually attributed to] 1 of strategy, forming part of a plan or scheme; *strategic(al) decisions*. 2 giving an advantage; right for a particular purpose; a strategic position, move…

• **Partner noun** a person who takes part in an activity with another or others, especially of one of several ownership of business…

• **Partnership noun** state of being a partner or partners, especially in business…

“cooperation”
“long-term”
“mutual benefit”
“risk sharing”
“common goals”
Our Strategic Partnership with Japan

Japan is our Core Market

- Customers
  - Crude and LNG
- Shareholders include
  - Mitsui and Mitsubishi
- Contractors
- Shipping
- Lenders
- Proximity and historical ties
Competing Concepts for Russian Resources

- Kovykta
- Angarsk - Nakhodka
- Angarsk - Daqing
- Sakh - 1
  - Oil from Siberia
  - 420,000 bopd
- Sakh - 2
- KORUS

Oil from Siberia:
- Angarsk - Daquing

Sakhalin Energy
THE NEW ENERGY SOURCE FOR THE ASIA PACIFIC
Sakhalin II Project Overview
In Our Presentation I Shall Cover:

- Introduction – Sakhalin Island
- Sakhalin Energy and its Organization
- Sakhalin II Project:
  - Phase 1 – Oil Production
  - Four Landmark LNG Sales
  - Phase 2 – Integrated Oil and Gas Production
  - Progress in LNG Marketing
- Sakhalin – The Strategic Supply Source for Japan
Sakhalin at a Glance

- Sakhalin Region formed 1947
- Territory – 87,100 Km2
- Population – 608,000
- Capital Yuzhno-Sakhalinsk
- Sakhalin Regional “Oblast”
- Legislature is Sakhalin Duma
- Main industry is fishing, timber, and oil & gas export
- 2/3 of Sakhalin area is mountainous
- Large temperature differences -54 C Winter and +38C in Summer
Sakhalin Island Geography

- Sakhalin Island stretches 948 km from north to south
  - Maximum width is 160 km, minimum 30 km

- 2/3 of Sakhalin area is mountainous
  - Highest mountain is Lopatin (1,609 m)
  - Two mud volcanoes and more than 60,000 rivers/streams

- Lakes number 16,000+. The largest is Nevskoye (178 km²)

- Large temperature difference between North & South
  - Winter average varies between minus 6 & minus 24°C, and in summer between plus 10 & plus 19°C (record: minus 54°C in Winter and plus 38°C in Summer)

- Most productive areas of ocean in the world
  - The Sakhalin coast and basin alongside Kuril Islands is Russia’s largest fishing ground
Sakhalin Energy - PSA Structure

- Russian Federation
- Sakhalin Oblast

Supervisory Board

- Shell Petroleum NV (100%)
- Mitsui & Co. Ltd (100%)
- Mitsubishi Corp. (100%)

- Shell Sakhalin Holdings B.V. (55%)
- Mitsui Sakhalin Holdings B.V. (25%)
- Diamond Gas Sakhalin B.V. (20%)

Production Sharing Agreement (1994)

Shareholders Agreement

Sakhalin Energy Investment Company Ltd.
Sakhalin Energy Staffing

We are a growing company

- Russian Staff: 666
- Non-Russian Staff: 586
- Total SE Staff: 1,252

10,000 construction workers now on the Island

Other locations: 163

- Molikpaq: 164
- Yuzhno-Sakhalinsk: 723
- Rijswijk (the Netherlands): 116
- Moscow: 86
Sakhalin Shelf: Hydrocarbons In-Place

GAS-IN-PLACE (196 Tcf)

- Sakhalin I: 4%
- Sakhalin II: 12%
- Sakhalin III: 14%
- Sakhalin IV: 20%
- Sakhalin V: 10%
- Sakhalin VI: 0%
- Sakhalin VII: 12%
- Sakhalin VIII: 14%
- Sakhalin IX: 20%

OIL-IN-PLACE (60,500 MMbbls)

- Sakhalin I: 3%
- Sakhalin II: 0.5%
- Sakhalin III: 1.5%
- Sakhalin IV: 7%
- Sakhalin V: 13%
- Sakhalin VI: 7%
- Sakhalin VII: 29%
- Sakhalin VIII: 11.5%
- Sakhalin IX: 2%

BOE In-Place (94,300 MMboe)

- Sakhalin I: 6%
- Sakhalin II: 2%
- Sakhalin III: 1%
- Sakhalin IV: 11.5%
- Sakhalin V: 9%
- Sakhalin VI: 31%
- Sakhalin VII: 10%
- Sakhalin VIII: 26%
- Sakhalin IX: 13%

Sakhalin Energy
THE NEW ENERGY SOURCE FOR THE ASIA PACIFIC
Sakhalin II Hydrocarbon Resources

IN-PLACE (8,700 MMboe)

RECOVERABLE (4,900 MMboe)
Sakhalin II Project: Phase 1

Vityaz Complex: Molikpaq, SALM and FSO
First offshore oil production in Russia
Produces during six month ice free summer season 60-70,000 b/d oil production

Oil Production
2000  12.4 million bbls
2001  15.1 million bbls
2002  10.8 million bbls
2003  10.3 million bbls
2004  11.69 million bbls
Supplying Crude Oil to Customers Since 1999
Sakhalin Vityaz Crude Oil Sales 1999 - 2004

- **1999**: 1.1 mln. bbls
- **2000**: 12.4 mln. bbls
- **2001**: 15.0 mln. bbls
- **2002**: 10.8 mln. bbls
- **2003**: 10.3 mln. bbls
- **2004**: 11.69 mln. bbls

*Acceleration of shift from Korea to Japan*
Our Crude Oil Customers in Japan

- COSMO
- Tohoku Electric
- Mitsubishi Corporation
- Nippon Oil
- Mitsui & Co., Ltd.
- Showa Shell
- Fuji Oil Co., Ltd.
- ExxonMobil
Cargo Destinations 1999 - 2004

<table>
<thead>
<tr>
<th>Cargo Destination</th>
<th>Time of Voyage</th>
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<tr>
<td>Japan</td>
<td>2 - 4 days</td>
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<tr>
<td>Korea</td>
<td>4 - 5 days</td>
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<tr>
<td>China</td>
<td>5 - 8 days</td>
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<tr>
<td>Taiwan</td>
<td>6 - 7 days</td>
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<tr>
<td>Philippines</td>
<td>7 - 8 days</td>
</tr>
<tr>
<td>USA</td>
<td>7 - 15 days</td>
</tr>
<tr>
<td>Thailand</td>
<td>12-13 days</td>
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</tbody>
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Declaration of Development Date Announced – May 15, 2003

- Sakhalin Energy and shareholders took Final Investment Decision on $10 billion + Phase 2 project
- Declared Development Date for the Lunskoye Field
- First sale of Russian gas into the Asia-Pacific markets with Japanese customers
- Russian Government provided assurance on long term PA/Lunskoye PSA license security
- Launched Phase 2 Project Financing
- Awarded major Phase 2 contracts
Sakhalin II Project: Phase 2

- Piltun -B Platform.
- Astokh Year Round Production.
- Lunskoye A Platform.
- Onshore Processing Facility.
- 1870 km Oil and Gas Pipelines.
- LNG Plant & Oil Export Terminal.
- Infrastructure Upgrades.
Phase 2 Project: A Four Year Challenge

- Piltun -B platform
- Lunskoye-A platform
Offshore platforms

- **Lunskoye**
  - 4 leg concrete gravity base.
  - Topsides 22,000 tonnes.
  - Gas production 1800 mmscf/d.
  - 30 well slots.
  - Possible oil rim production.

- **Piltun**
  - 4 leg concrete gravity base.
  - Topsides 28,000 tonnes.
  - Oil production 70,000 b/d.
  - Gas production 92 mmscf/d.
  - 45 well slots.
Lunskoye / Piltun GBS Construction at Vostochniy in Summer

GBS Concrete Base
Lunskoye GBS in October, 2004

First Shaft Completed 22nd October 2004
The Lunskoye concrete substructure has a total weight of 116,000 tonnes.

The base is 105 metres by 88 metres and 13.5 metres high.

The diameter of each leg measures more than 20 metres and they are some 56 metres high.

Total height of the entire structure is 69.5 metres.
Tow to Offshore Location

LUN-A
- Towing distance ≈ 960 nm.
- Duration of tow ≈ 16 days.
- 3 Tugs, each of 150 Tonnes.
- 1 Tug to assist during tow.

PA-B
- Towing distance ≈ 1020 nm.
- Duration of tow ≈ 17 days.
- 3 Tugs, each of 150 Tonnes.
- 1 Tug to assist during tow.

Milestone 5

Milestone 6
Installation of UD40 with underdeck outfitting in place
Piltun – Status

PAB Lower Deck Block LD 21 – Turn Over
Phase 2 Project: A Four Year Challenge

Onshore Processing Facility
OPF – View Looking North
OPF - Status

Piperack Erection

Gas/Liquid Exchanger onto Foundations

Condensate Tank
Parking Loop Vessel – Loaded onto Foundations
Phase 2 Project: A Four Year Challenge

Pipelines
Offshore Pipelines – Status

Cable Casing Pulled to Shore
Offshore Pipelines – Status

Lunskoye Landfall – Cofferdam with Pull-heads
Onshore Pipelines – Status

ROW preparation – Spread # 2
Onshore Pipelines – Status

Welding at KP 336
Onshore Pipelines – Status

Pipelaying in Onor District
Onshore Pipelines – Status

Lowering at KP 589
Onshore Pipelines - Status

Commencement of 1st weld on 48” pipeline (3rd November 2004)
Phase 2 Project: A Four Year Challenge

LNG plant and export terminal
Sakhalin II LNG Plant – Project Dimensions

• State-of-the-art LNG processing technology for maximum advantage of Sakhalin climate – more LNG in the winter

• Feed gas supplied from dedicated Sakhalin Energy fields

• Plant with two parallel LNG trains each producing 4.8 million tons LNG per annum – largest in the world

• LNG export terminal suitable for wide range of LNG carriers, operating 24 hours a day, 365 days a year

• Engineering completed, construction progressing
LNG EPC CONTRACT ORGANISATION
LNG Plant:
Green Field to Construction Site
(photographed by Tokyo Gas)

14 July 1998
16 September 2004
LNG – Process Train Foundations

Process Train-1 PR-101
Base Concreting Block-1

Process Train-1 C-1301 ABC
Rebar Installation
LNG / Oil Export Terminal Status

LNG Piperack PR-101
LNG / Oil Export Terminal Status

LNG Tank T-3101
LNG Material Offloading Facility Status

Installing first MOF insert

Installing fourth MOF cell
Four Landmarks Japanese LNG Sales Agreements

- 12 May 2003 HoA signed with Tokyo Gas - 1.1 million tonnes a year from 2007 for a period of 24 years.
- 19 May 2003 HoA signed with Tokyo Electric - 1.2 million tonnes a year from 2007 for a period of 22 years, 23 April 2004 TE declared increase of the long term volumes to 1.5 million, and on 5 November full SPA was signed.
- 24 July 2003 HOA signed with Kyushu Electric – up to 0.5 million tonnes a year from 2009 for a period of 21 years, 9 June 2004 full SPA signed between Kyushu Electric & Sakhalin Energy.
- 12 March 2004 HOA signed with Toho Gas – 0.3 million tonnes from 2010 for the period of 23 years.
- Total Volume sold to-date to Japan is 3.4 million tonnes per annum.
2004: Toho Gas HoA Signed; Additional Volume
2004:Kyushu Electric SPA Signed; Additional Volume
2004: Tokyo Electric SPA Signed; Additional Volume
First Russian Gas Exports to North America!
Key Terms of Baja Agreement

- Volume: 37 mt
- Duration: 20 years
- Start Date: 2007-2008
- Delivery: Delivered Ex-Ship
- Destination: Terminal developed at Costa Azul
- Take-or-Pay: Yes
- Price: Linked to gas price in USA
Shell and Sempra will Share Capacity of Sempra Terminal
Why has Sakhalin Energy Entered into this SPA?

<table>
<thead>
<tr>
<th>Economics</th>
<th>High operating load factors in startup years</th>
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<td>Debt capacity</td>
<td>Russia-Mexico-USA</td>
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<tr>
<th>Russian flag</th>
<th>American flag</th>
<th>Mexican flag</th>
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Sakhalin Energy
THE NEW ENERGY SOURCE FOR THE ASIA PACIFIC
Sakhalin Energy has been shortlisted as Negotiation Invitee
- Currently negotiating with Kogas
- Selection date for Preferred Sellers postponed
- Power Generation Companies also permitted to import LNG; Term Sheets or HOAs to be agreed with potential Suppliers
- MOCIE will subsequently select Preferred Sellers from Kogas shortlist and GenCo offers

Kogas

- Metropolitan Area
- Major City
- LNG Receiving Terminal
New Chinese LNG Terminals

- Forecasted increase of gas share in total energy balance from 3% in 2003 to 10% in 2010
- Gas demand will be partially met by LNG import

2. Fujian LNG (2007-08)
4. Shanghai LNG (2009)

(Kovykta Pipeline >2012)
(West-East Pipeline)

(NDRC Planned Projects)
Developing Our Success ...
We will sign More Contracts in Japan beyond Our Foundation Customers
Our Strategic Partnership with Japan

Our Aspired Market
LNG Ship Signing Ceremony
Two Japanese-Russian Shipping Consortia

Nippon Yusen Kabushiki Kaisha - 60%
SC Sovcomflot - 40%

Mitsui O.S.K. Lines - 45%
Kawasaki Kisen Kaisha - 30%
Primorsk Shipping Corporation - 25%
Project Financing

- Agreement for Phase 1 financing of $348m signed in Dec 1997
- Phase 1 loan repayment commenced in Oct 2000
- PIM for Phase 2 financing launched in Jun 2003
- Phase 2 financing Term Sheet negotiations with JBIC, EBRD, ECGD and USEXIM complete in Oct 2004
- Commercial bank appointment process to start early next year and Financial Signing targeted for mid next year

Phase 2 financing is:
- largest ever project financing on a limited recourse basis (roughly $5bn senior debt targeted);
  - for the project of unprecedented size and complexity in Russia; and
  - flexibly structured to accommodate the expected build-up of LNG sales commitments.
Sustainable Development
Sakhalin II Project is on Track
(Current Status Highlights)

• 6th season Oil production completed with 11.69 million barrels in 2004

• Phase 2 construction 45% completed

• More than 50% LNG capacity sold

• 2 trains capacity expected to be sold by mid 2005

• Two contracts for three LNG ships were signed

• Financial close expected mid 2005
Why Gas from Sakhalin?
Sakhalin Energy is the Strategic Supply Source of Gas to Japan

• Earliest available gas from Russia
• Closest source of LNG to Japan
• Established LNG infrastructure in Japan
• Unrivalled shareholder track record in LNG projects worldwide (45% MC and MBK)
• Diversification of energy supply from the North
• Competitive pricing
• Winter seasonality of production
• Robust Production Sharing Framework
• Strong Russian Federal and Oblast support
• Plentiful high quality reserves of both oil and gas from the whole of Sakhalin Island
With the development of the Sakhalin projects, Russia is now establishing itself as a reliable supplier of oil and gas in Japan and creating a new energy configuration in the Asian and Pacific Region. Sakhalin LNG provides an immediate opportunity for customers to experience the energy proposition offered by Russia.