Molycorp
THE RARE EARTHS COMPANY

Meeting the Global Rare Earth Challenge:

Molycorp's Fully Integrated, Mine-To-Magnets Manufacturing Supply Chain

March 2011 Update





Forward-Looking Statements and Other Important Cautions

This presentation contains forward-looking statements that represent Molycorp's beliefs, projections and predictions about future events or Molycorp's future performance. Forward-looking statements can be identified by terminology such as "may," "will," "would," "could," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "potential," "continue" or the negative of these terms or other similar expressions or phrases. These forward-looking statements are necessarily subjective and involve known and unknown risks, uncertainties and other important factors that could cause Molycorp's actual results, performance or achievements or industry results to differ materially from any future results, performance or achievement described in or implied by such statements.

Factors that may cause actual results to differ materially from expected results described in forward-looking statements include, but are not limited to: Molycorp's ability to secure sufficient capital to implement its business plans; Molycorp's ability to complete its modernization and expansion efforts and reach full planned production rates for rare earth oxides and other planned downstream products; uncertainties associated with Molycorp's reserve estimates and non-reserve deposit information; uncertainties regarding global supply and demand for rare earths materials; Molycorp's ability to maintain appropriate relations with unions and employees; Molycorp's ability to successfully implement its "mine-to-magnets" strategy; environmental laws, regulations and permits affecting Molycorp's business, directly and indirectly, including, among others, those relating to mine reclamation and restoration, climate change, emissions to the air and water and human exposure to hazardous substances used, released or disposed of by Molycorp; and uncertainties associated with unanticipated geological conditions related to mining.

For more information regarding these and other risks and uncertainties that Molycorp may face, see the section entitled "Risk Factors" in Molycorp Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2010 filed with the SEC. Any forward-looking statement contained in this presentation, or the Quarterly Report on Form 10-Q , reflects Molycorp's current views with respect to future events and Molycorp assumes no obligation to publicly update or revise these forward-looking statements for any reason, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future, except as otherwise required by applicable law.

This presentation also contains statistical data and estimates obtained by Molycorp from industry publications and reports generated by third parties. Although Molycorp believes that the publications and reports are reliable, it has not independently verified such data.

THIS PRESENTATION USES THE TERM "RESOURCES" TO DESCRIBE THOSE QUANTITIES OF REE'S THAT ARE POTENTIALLY RECOVERABLE FROM ACCUMULATIONS YET TO BE DISCOVERED. BECAUSE OF THE UNCERTAINTY OF COMMERCIALITY AND LACK OF SUFFICIENT EXPLORATION DRILLING, THE RESOURCES CANNOT BE CLASSIFIED AS RESERVES. INVESTORS ARE ADVISED THAT THE SEC DOES NOT RECOGNIZE RESOURCES. ONLY PROBABLE AND POSSIBLE RESERVES MAY BE DISCLOSED TO INVESTORS IN AN SEC FILING. RESOURCES HAVE A GREAT AMOUNT OF UNCERTAINTY AS TO THEIR EXISTENCE. THERE IS NO CERTAINTY THAT ANY PORTION OF THE RESOURCES WILL BE DISCOVERED AND, IF DISCOVERED, WHETHER THEY COULD BE DEVELOPED ECONOMICALLY. THEREFORE, INVESTORS ARE CAUTIONED NOT TO ASSUME THAT ALL OR ANY PART OF MOLYCORP'S RESOURCES EXIST, OR THAT THEY CAN BE DEVELOPED ECONOMICALLY. ACCORDINGLY, INFORMATION CONCERNING DESCRIPTIONS OF RESOURCES CONTAINED IN THIS PRESENTATION IS NOT COMPARABLE TO INFORMATION INCLUDED IN SEC FILINGS.

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Rare Earths Video

Rare Earths Are Critical to Enabling Various Technologies

Significant REEs

- Lanthanum
- Cerium
- Praseodymium
- Neodymium
- Samarium
- Dysprosium
- Europium
- Terbium
- Gadolinium
- Yttrium

Properties

Reduces

- Weight
- Emissions
- Energy consumption

Allows

- Greater efficiency
- Performance
- Miniaturization
- Speed
- Durability
- Thermal stability

Product applications

Molycorp intends to produce all 10 of these rare earth elements commercially

Molycorp has achieved multiple milestones since the IPO in July 2010

Operational

- ✓ Fully permitted for construction (including Phase 2 expansion)
- ✓ Recommenced mining operations
- ✓ Started construction of Phase 1 project ahead of schedule

Vertical Integration

- ✓ Commenced sales of XSORBX in 3Q 2010
- ✓ Non-binding LOI with Hitachi Metals for magnets and alloys
  - Access to intellectual property to execute "mine-to-magnets" strategy

Supply Agreements

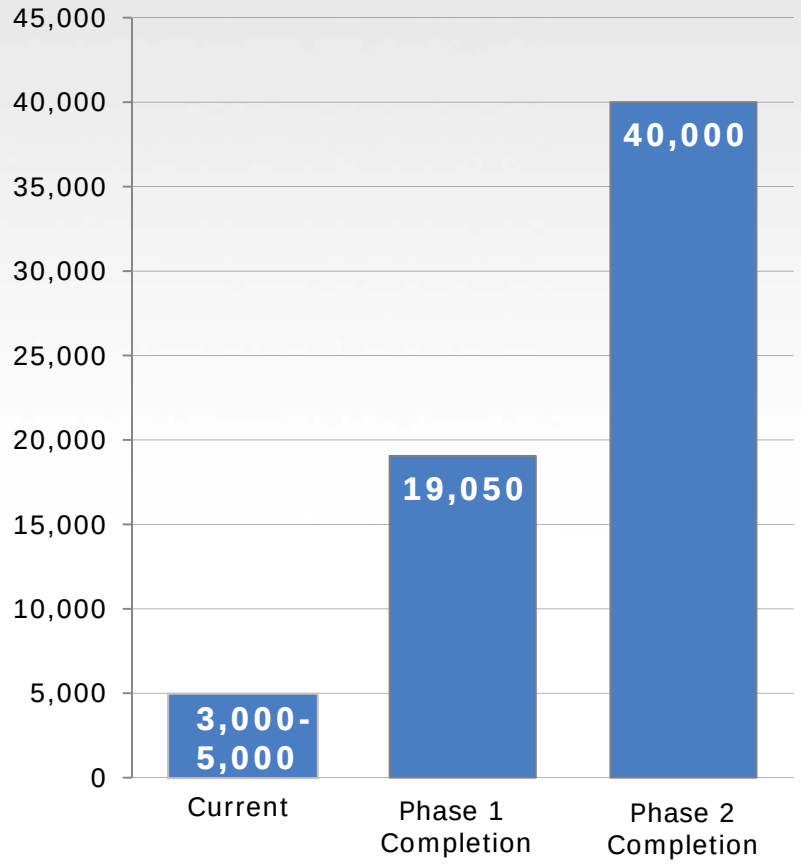
- ✓ Non-binding MOU with Sumitomo Corporation
  - Expected to supply cerium and lanthanum-based products at market-based prices
- ✓ 2011 Production sold out (>4000 tons REO)
- ✓ Definitive agreement with W.R. Grace
  - Supply of primarily lanthanum-oxide

Financing

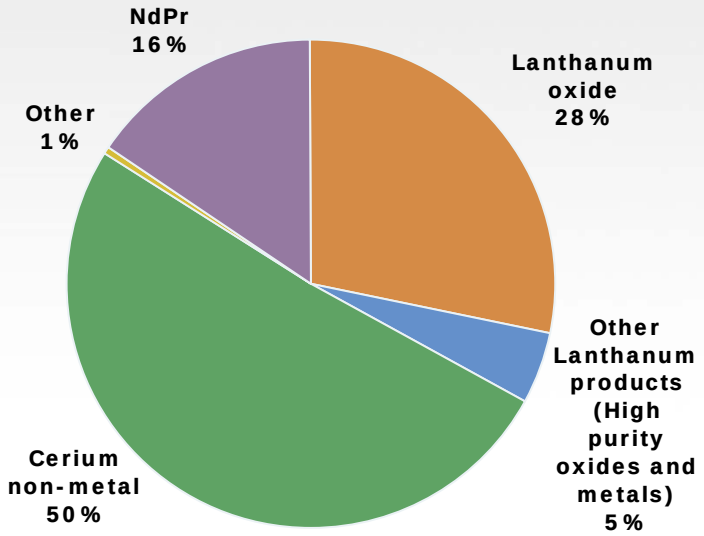
- ✓ $130mm debt and equity investment in Molycorp through the Sumitomo non-binding MOU
- ✓ Advanced to second round for DOE loan guarantee program ($280MM)
- ✓ Raised ~$173MM in mandatory convertible preferred stock offering

Near-Term Plans to Double Production Capacity

Total REO Production Capacity
(REO equivalent in metric tons / year)



Expected production breakdown by REO

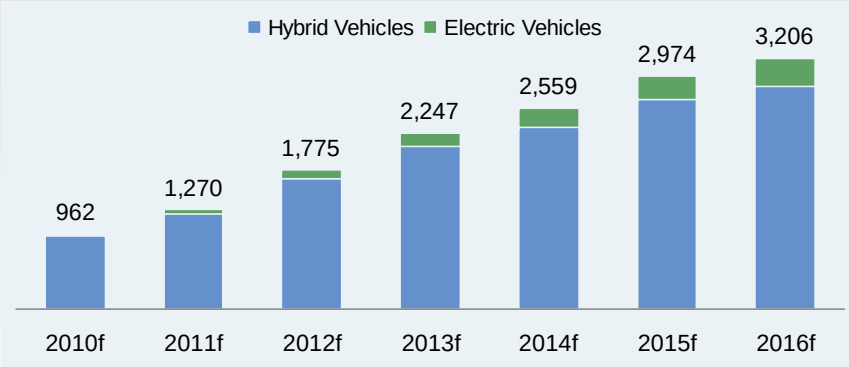


Rare Earths Are Critical Inputs for the Hybrid and Electric Vehicles Market

Hybrid and Electric Vehicles Demand Drivers:

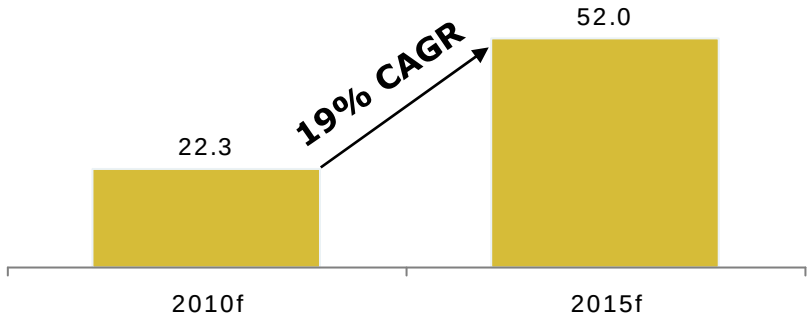
- Intensive use of rare earths in hybrid and electric vehicles are compounding the traditional use of rare earths
- Hybrid and electric vehicles contain 9-11 kgs of rare earths
- Anticipated rare earth demand from hybrid and electric vehicles is estimated to grow significantly

Annual Hybrid and Electric Vehicle Sales (000's)



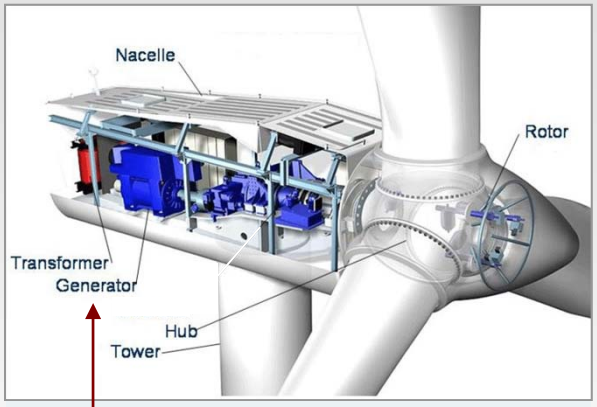
Source: JD Power and Associates

Total Rare Earth Metal Alloys Consumption (ktpa)



Source: IMCOA

Wind Turbines Are a Significant Driver for Rare Earth Magnet Growth



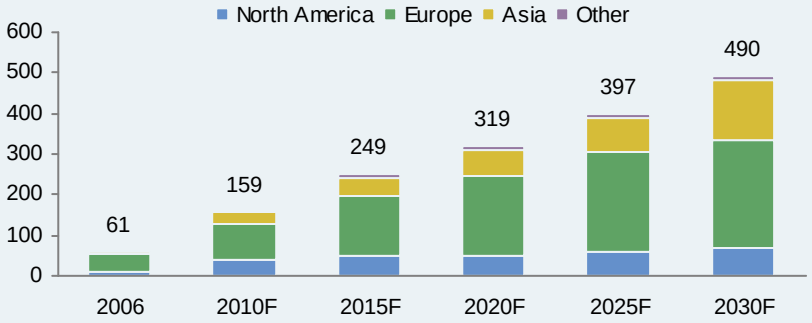
Permanent rare earth magnet in generator

Each 3MW permanent magnet turbine requires approximately one metric ton of neodymium iron boron magnets[1]

Wind turbine demand drivers

- Global commitment to increasing the presence of wind energy:
  - U.S. EIA estimates >3x increase in installed wind generation 2010-30 to 490GW
  - China is estimated to have allocated >$150bn to become the world's wind leader
  - Growing European use of offshore wind generation
- Permanent rare earth magnets are used in generators of wind turbines
  - Increased reliability and efficiency – reduces expensive breakdowns and maintenance expenditures
  - Critical element for 3MW+ and off-shore turbine segments
- With the expected JV, Molycorp would have access to the raw materials, IP and technical expertise to be a world-class supplier of permanent magnets

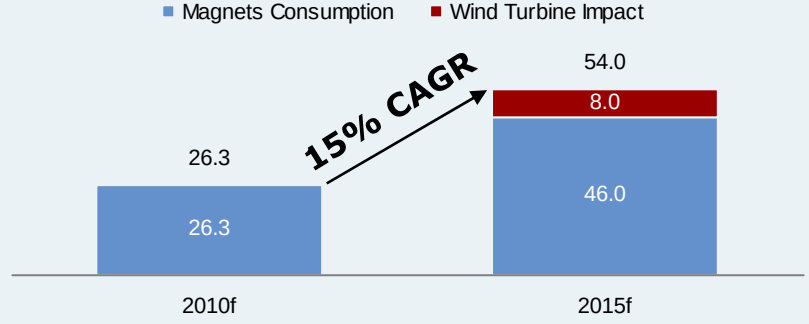
Wind turbine production (GW)



Source: Energy Information Administration

[1] IMCOA estimates each megawatt requires 0.4 tons of NdFeB magnets

REO consumption for magnets (ktpa)

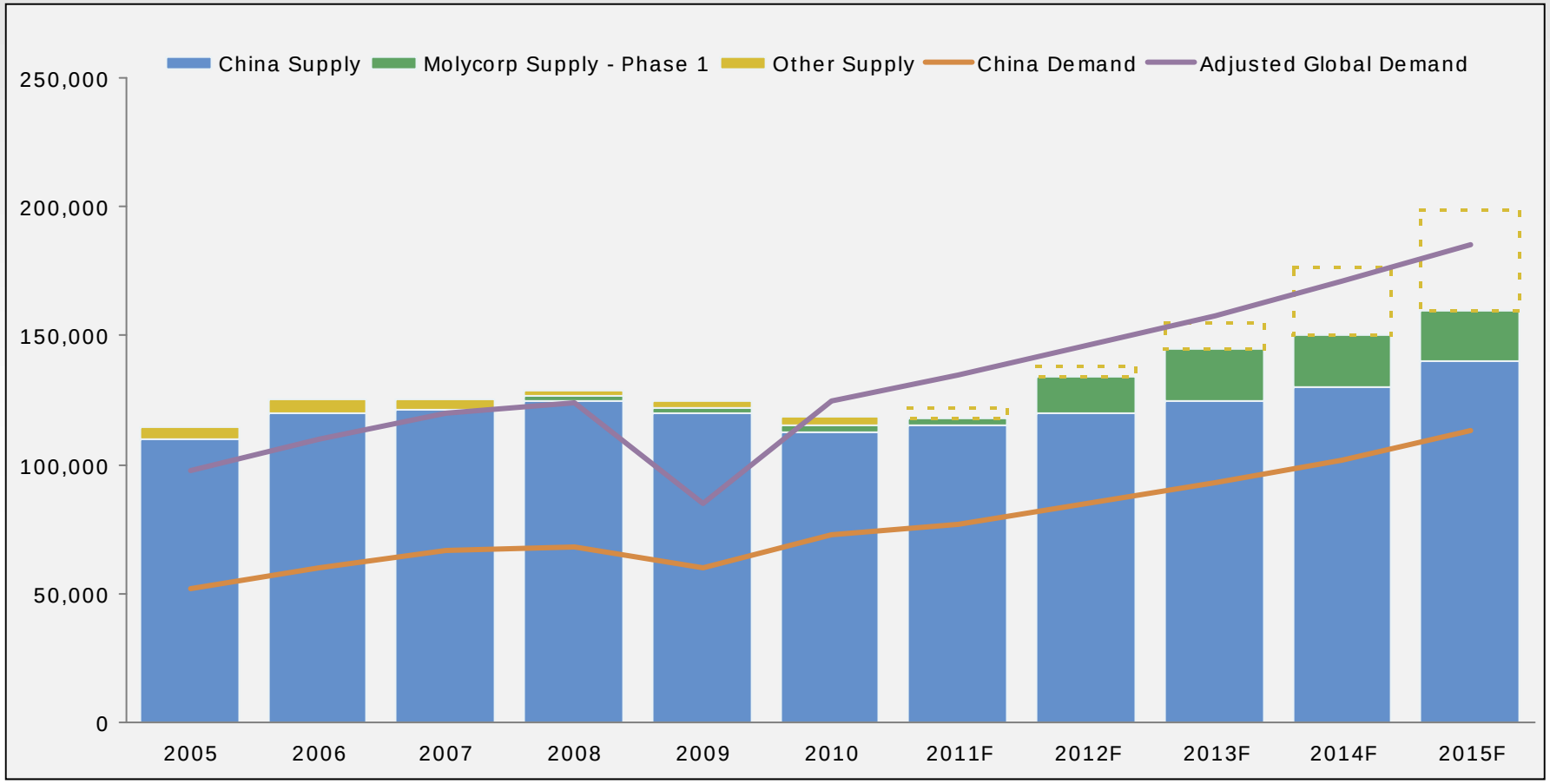


Source: IMCOA

Note: Both magnet consumption and wind turbine impact are middle of IMCOA range

Global Demand Growth Will Continue to Justify Additional Supply

Global Rare Earths Supply and Demand (mt, REO ±20%)[1]

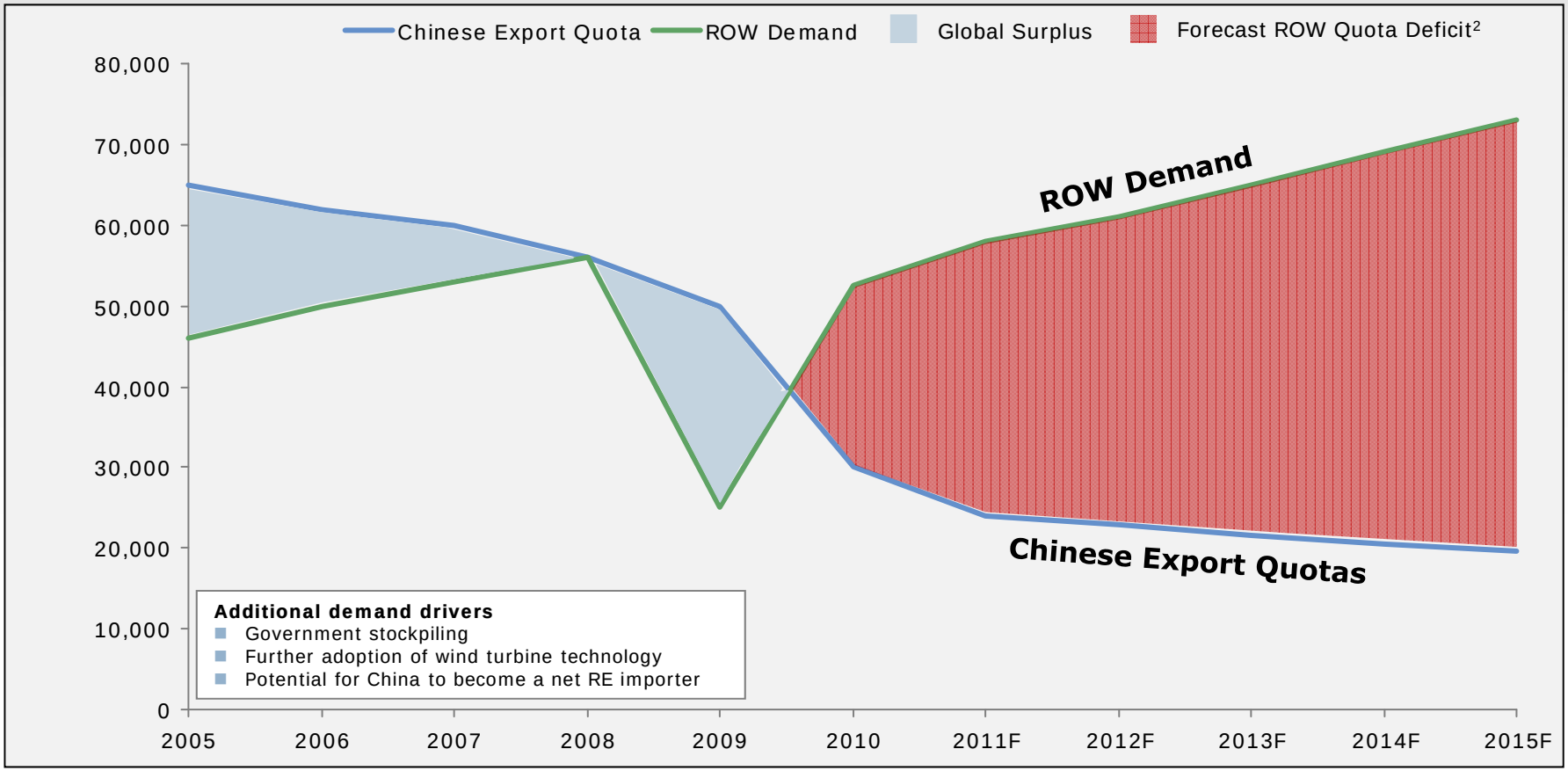


Source: IMCOA (January 2011)

[1] Does not reflect Molycorp's potential to increase production to 40,000 mt of REO per year following completion of Phase 2 expansion plan, but instead reflects anticipated production of 19,050 mt of REO per year beginning in 2013

Chinese Exports Constraints Require a Western World Supply Response

Global Rare Earths Forecasted Deficit[1]



Source: IMCOA

[1] Based on actual announced quotas through the first half of 2011 and IMCOA forecasts (35% reduction compared with the first half of 2010); Please refer to page 9 of the Form S-1 Registration Statement for information regarding Chinese quotas

[2] ROW quota deficit shows the supply deficit that would occur should no REE production outside of China comes online

Observations On China

1. 1H 2011 Chinese export quotas continue 7-year downward trend; senior officials warn of declining quotas in the future.

2. Multiple government initiatives will affect production and price levels: hundreds of illegal mines closed; export licenses reduced; export taxes increased; VAT rebate on exports withdrawn; coordinated pricing sought; environmental reforms; vertical industry consolidation being forced.

3. Implementation of strict environmental standards expected to "double production costs" (*Wang Guozhen, the former VP of China Nonferrous Engineering and Research Institute*)

4. Internal REE demand rising with GDP growth while Chinese production from 2005-2010 relatively stagnant

5. 59% of respondents think China will "**become a net importer of rare earths by 2015**" in a Metal-Pages.com poll. Senior Chinese officials not ruling out this possibility.

World-Class Mineral Resource at Mountain Pass, CA

Reserves & Resources

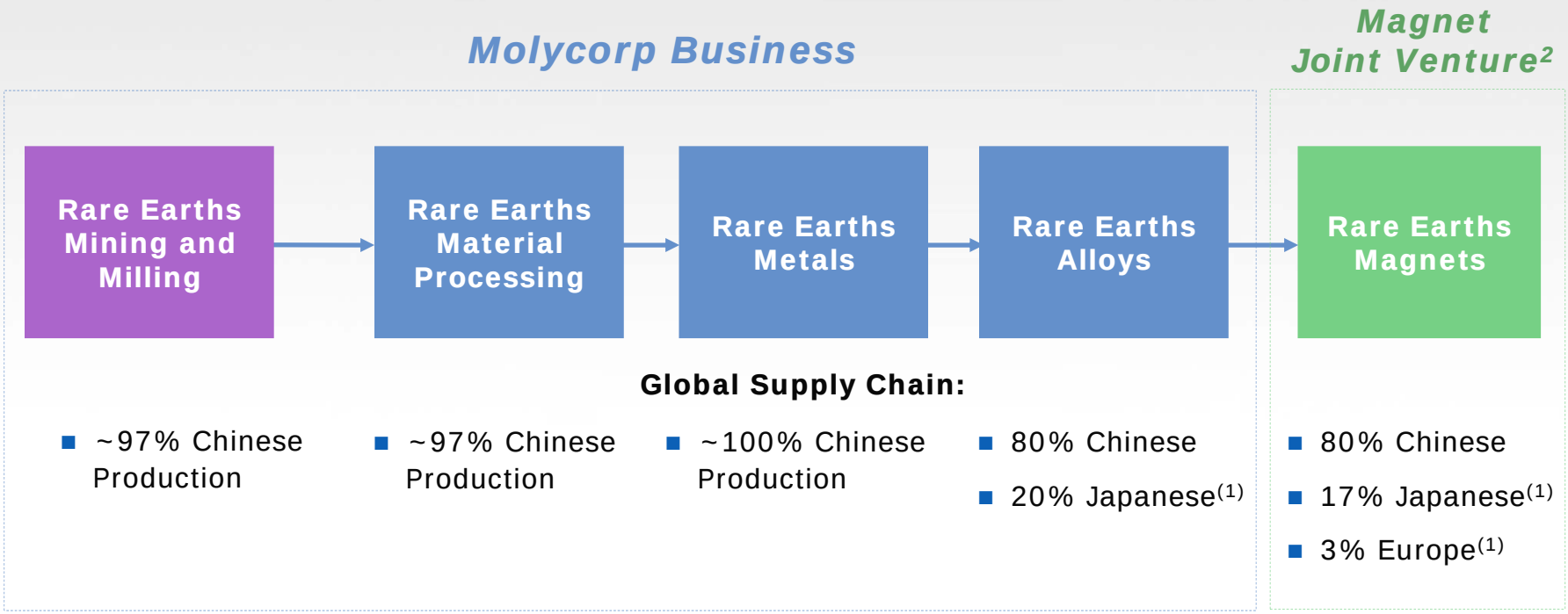
Category	REO %	k tons	REO (Mlbs)
SEC Guide 7: Proven and Probable	8.24	13,588	**2,210**
NI 43-101: Measured & Indicated	6.68	24,341	**3,251**
NI 43-101: Inferred	6.32	10,446	**1,320**
NI 43-101 Totals		34,787	**4,571**

Source: SRK report dated April 2010
Note: See disclaimer for information on reserves and resources

- 58 years of operating history
- Mine permit and EIR allow operations through 2040
- Mining operations re-started in Dec. 2010
- Construction of new processing facility underway
- Plan provides for fully installed infrastructure
  - Water
  - Electricity
  - Natural gas pipeline
  - Easy access to Interstates, rail head, and California seaports
- Facility is ISO 9000 and ISO 14000 certified
- Estimated 30+ years mine life based on Phase 1 production plan (15+ years with Phase 2 expansion assuming no increase in recovery rates or additional exploration drilling)
- 191 Employees

Our Mine-to-Magnets Manufacturing Supply Chain

Molycorp's "Mine-to-Magnets" strategy differentiates us from other early stage concentrate or oxide-only projects, and provides exposure to the high margin metals, alloys, and magnet markets



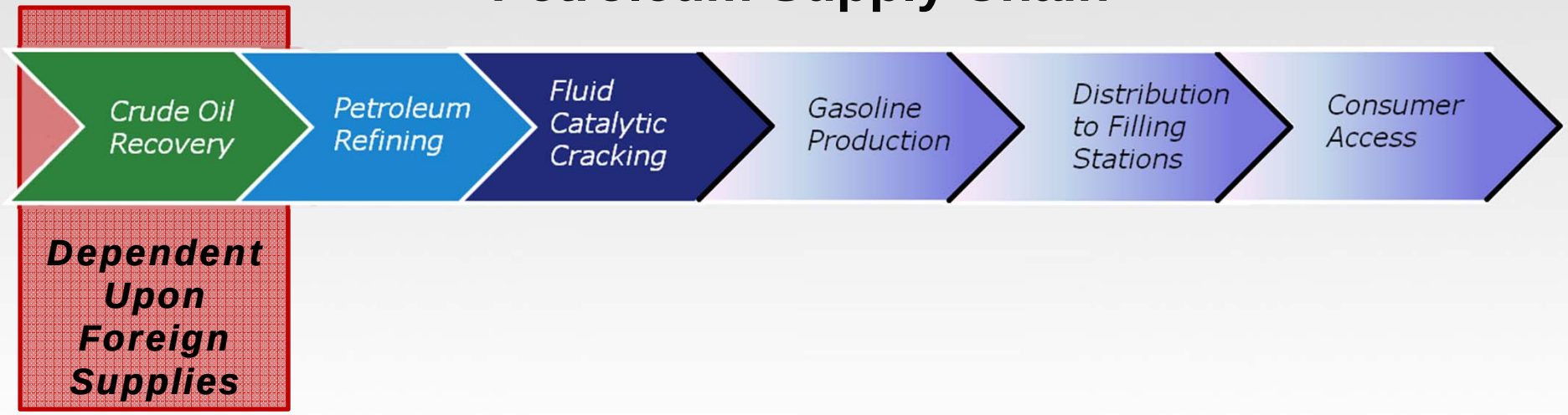
Source: REITA report dated January 27, 2010

[1] *Dependent on Chinese rare earths feedstock*

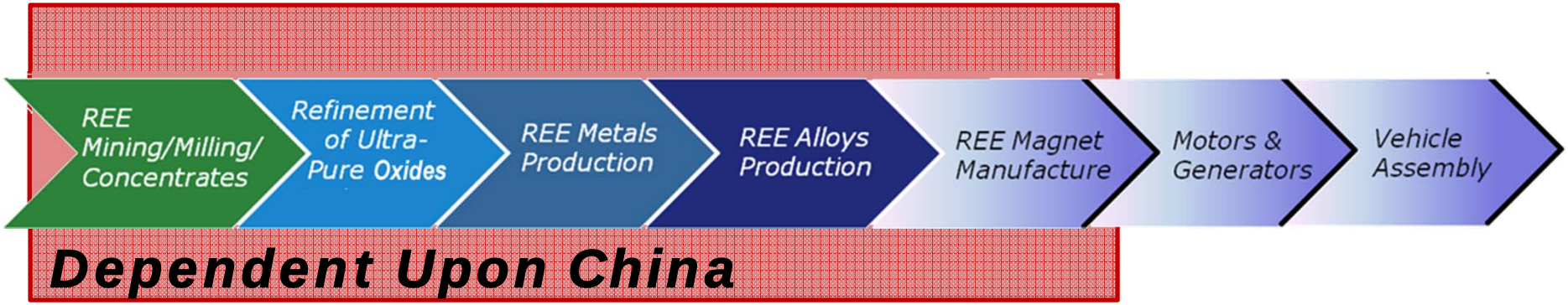
[2] *"Molycorp and Hitachi Metals, Ltd. have entered into an agreement regarding the planned formation of joint ventures for the production of rare earth alloys and magnets in the U.S.*

Trading One Dependence For Another?

Petroleum Supply Chain



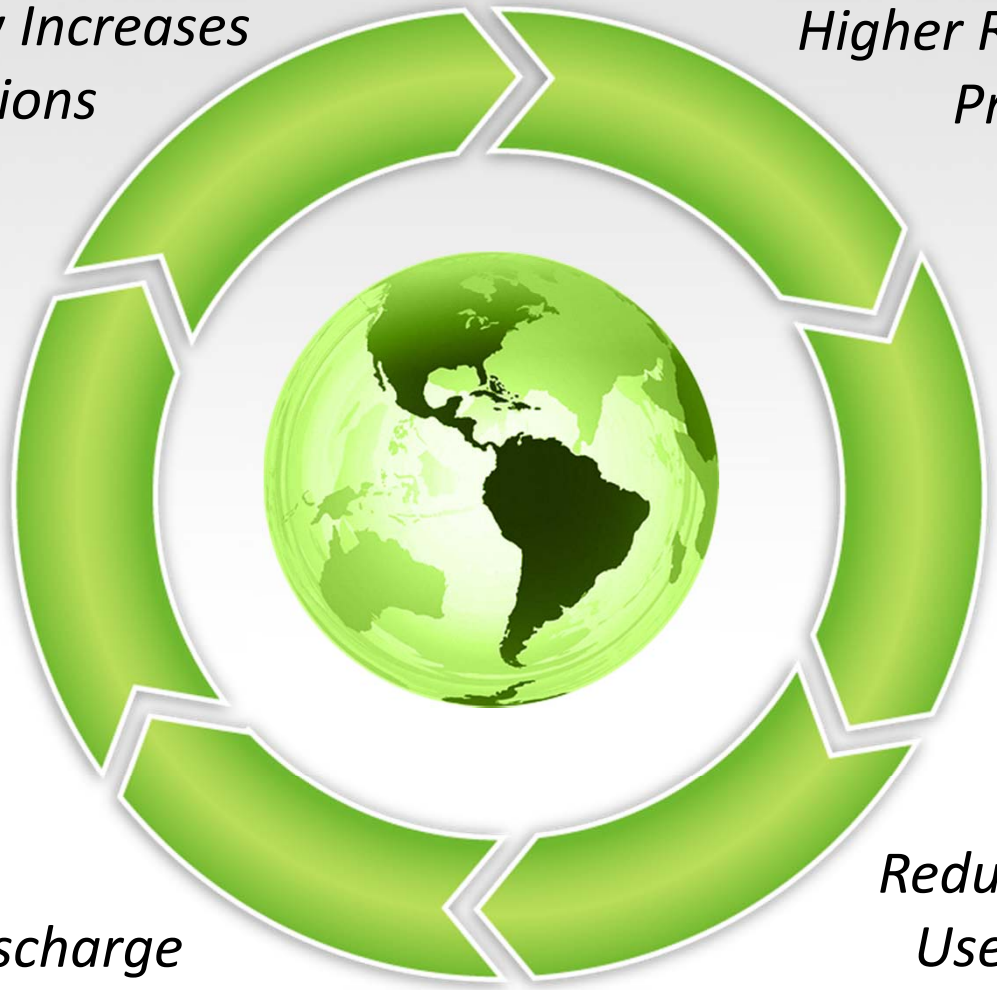
Hybrid and Electric Vehicle Supply Chain



Environmental Technology Breakthroughs

Energy Efficiency Increases and GHG Reductions With On-Site Natural Gas Co-Gen

Large Reduction of Reagent Use



Higher RE Recovery and Process Efficiency Breakthroughs Allow for Same Amount of Product Using ½ The Ore

Dramatic Reduction in Process Use of Fresh Water

Near-Zero Wastewater Discharge

Breakthrough Technologies

XSORBX™ pure solutions

Molycorp Deploys Incredibly Flexible Technology Focused on:

Water Treatment

- Lack of Clean drinking water is a global problem
- XSORBX® unique chemistry removes:
  - Pathogens such as Protozoa, Fungi, Bacterial, Viruses
  - Organic toxins such as Pesticides
  - Heavy metals such as Arsenic, Selenium, and Chromium
- We're developing man-portable filters to give our troops the cleanest drinking water available

Industrial Process Waste Streams

- XSORBX® ASP, Arsenic Sequestration Process employs the XSORBX® technology in the mining and smelting industry
- Volumetric capacity for specific hazardous materials that exceeds any other commercially available product
- Studies show stable, concentrated waste could potentially be classified as non hazardous

Commercial Opportunities In Recycling

1. **Recycling will be critical to the rare earth industry, and Molycorp will be a leader in the recycling industry.**

2. **Molycorp's new plant was designed with recycling in mind.**
   - Lowest-cost operation in the industry.
   - Highly flexible circuit design.
   - Recycled REE's can be co-processed with primary production, yielding additional cost savings.

3. **Key focus areas:**
   - RE phosphors from CFLs
   - NdFeB alloy recovery in magnet manufacture

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Public Policies That Can Help Rebuild a Domestic Rare Earth Industry

1. **Accelerating reestablishment of a defense stockpile**
   - DoD working to determine its needs
   - Stockpile reform will require Congressional direction
2. **Workforce development and training**
   - Very difficult to find candidates with necessary skills, experiences
   - China has over 6000 full time rare earth technologists; the US has about a couple of dozen
3. **Recycling as key near-term means of increasing supply**
   - Molycorp investigating a commercial path to CFL recycling
   - Critical source of heavy rare earths (Y, Eu, Tb)
   - Key impediment: how to get consumers to respond
4. **Revitalizing rare earth academic infrastructure**
   - US used to be the intellectual center of rare earth research
   - Now, only one university course on rare earths in the US
5. **Commitment to Research and Development**
   - Recycling, processing, minimization, substitutes
   - Will also help to build a skilled rare earth workforce

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Questions?