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The Transition from Fossil to Renewable Energy Systems: What Role for Export Credit Agencies?

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Section I. The Context for Export Credit Agency Financing

A. Explanation of Export Credit Agencies

Export credit agencies (ECAs) are financial institutions that promote exports and facilitate investments to riskier overseas markets. ECAs are highly heterogeneous institutions both in terms of the mix of financial services they offer to exporters as well as their ownership and operating structures. Generally, however, these institutions can be divided into two groups: (1) investment insurers which focus on covering or underwriting political and commercial risks; and (2) lending institutions that cover political risk, through sovereign guarantees, but also provide direct loans or equity investments to exporters or project developers from their home countries.

Although ECAs specialize in different financial services, for the most part they concentrate on the following four products: insurance, guarantees, short- and long-term lending, and project finance. Insurance and guarantees are similar in that they ensure a lender or a seller (exporter) that should the borrower or buyer fail to fulfill a contract because of developments covered by the guarantee or insurance premium (civil unrest, expropriation of property, nationalization of a company, inability to convert profits or payments from local currency to hard currency, breach of contract, etc) the insurer or guarantor will repay a percentage (usually 85% to 95%) of the debt due. The risks covered by insurance are usually more narrowly defined than those covered by guarantees. In addition, governments' treasury resources back guarantees, while insurance is backed by the insurer's cash reserves.

ECAs extend short-term and long-term loans to project developers, exporters or importers in developing countries for the purchase of goods, services, and equipment from the ECAs' home country. Trade finance consists of loans with repayment periods (maturities) of less than two years. This is the core business of most ECAs. Long-term loans enjoy repayment periods of more than two years but less than 10 years (with some exceptions for particular sectors such as nuclear power, and power plants that enjoy longer maturities). During the 1990s ECAs also began offering project financing, which is similar to the long-term loan described above, but which explicitly recognizes that ECA will be repaid from revenues generated by the commercial activity or project that receives the financing once that begins to operate. Power plants, in particular, have been financed using project finance with repayment to be made from the profits generated from electricity sales.

ECAs are not uniformly state-owned, or state-operated. Many ECAs are private insurance or banking firms that agree, through an arrangement with national governments, to administer official export credits. This is the case of Hermes, SACE (Italy's ECA), COFACE (France's ECA), and NCM (the Dutch ECA). However, a number of ECAs operate as arms of finance, trade or industry ministries, such as the ECGD (the UK's ECA), and Japan's EID-MITI (it has recently been privatized and is now known as NEXI). Others remain government-owned corporations or banks (such as

OPIC and the Ex-Im Bank of the United States, and the Export Development Corporation of Canada).

- Political and Institutional Mandates of ECAs

Despite their heterogeneity, ECAs' institutional mandates are generally consistent. All ECAs share a mandate to administer official funds to underwrite, guarantee or provide financing to national companies and industries seeking to export goods or services (or to develop commercial and industrial projects) in risky overseas markets. Many ECAs have other associated mandates, such as job creation, support for small and medium sized exporters, or promotion of export businesses owned by socio-economically disadvantaged groups, etc. In a few cases, such as the UK's ECGD and the US OPIC, ECA mandates include promotion of sustainable development. But for the most part ECA mandates are narrowly crafted around trade and export promotion. Until recently, most ECAs expressed the view that demands from civil society or other line ministries that they address environmental, social or sustainable development concerns in their lending and operations are outside their mandate. A number of ECAs continue to hold this viewpoint.

Risky overseas markets are generally those deemed to pose significant political or commercial risks to private exporters or investors. Organisation for Economic Cooperation and Development (OECD) governments do not want their ECAs to compete with private financial institutions and generally try to minimize the potential trade distortions ECAs can create by offering financing terms that are more favorable than those offered by commercial banks. As a result, these institutions are supposed to confine their business to risks not covered by private or commercial insurers (largely political risks) and to countries where commercial banks are unwilling to lend without charging a considerable interest rate premium (low and middle income countries).

During the 1990s, the flow of private capital to emerging and developing markets quintupled from $50 billion to $250 billion per annum (World Bank, 2000). Many commercial banks and insurers followed these new flows to developing countries and transition economies. This development blurred the line between commercial financial institutions and ECAs. The current global economic downturn and macro-economic and financial crises in the emerging markets of East Asia and Latin America have caused commercial and private financial institutions to withdraw from these markets. This is re-establishing a niche for officially supported export credits. However, ECAs are generally mandated by governments to avoid losses on their balance sheets (i.e., cover their costs). As a result, they have also become more risk averse in this environment.

- International Rules and Agreements on Export Credits

Because ECAs have a mandate to support domestic companies that export or invest abroad, governments historically manipulated ECA financing to undercut exporters from other countries and give their industries a competitive advantage. As a result, export credit agencies would frequently compete with one another to offer better financing terms

to buyers of exports or to their domestic companies help win supply or project development contracts. This successive undercutting significantly distorted capital markets and put commercial financial institutions at a disadvantage.

In response, OECD governments agreed in the late 1970s to establish a set of minimum terms to which all official export credits would conform. This agreement, known as the *Arrangement on Guidelines for Officially Supported Export Credits* and referred to hereafter as the Arrangement, has been in place since 1978. The Arrangement effectively limits the amount of subsidy ECAs can grant to exporters and investors in the form of minimum interest rates for loans, premium benchmarks for insurance, maximum repayment terms, and minimum cash payments to be made before extension of an export credit. This Arrangement does not eliminate completely the subsidies provided by ECAs, but reduces them significantly by linking the terms ECAs can offer to prevailing market and commercial rates for comparable services. It also stops ECAs that are party to the Arrangement from undercutting one another in attempts to offer progressively better terms to their domestic firms (OECD, 1998).

The Arrangement does make some exceptions with regard to repayment periods for exports or projects in particular sectors, in particular power plants, nuclear plants, ships, and civil aircraft. These exceptions consist of extending repayment periods, and minimum or maximum interest rates. In the case of nuclear power, for example, the repayment period is extended to 15 years, from the normal maximum of 10 years, because of the high capital costs of such projects (OECD, 1998).

The Arrangement also establishes parameters for when and under what conditions governments can combine official export credits with official development assistance (ODA), grants or other forms of concessional financing (OECD, 1998). Many governments combine a bilateral aid grant with an official export credit that requires the grantee to purchase commercial equipment or goods from exporters in the donor country. Thus, a grant to build a hospital might be tied to an export credit to purchase medical equipment from the donor country. This form of grant giving is referred to as "tied aid." It can also have a distorting effect on credit markets and may force grantees to purchase goods and services that are either not appropriate for their needs or are more expensive than equivalent products available domestically or from other markets.

Under the Arrangement, only low-income countries (those eligible for 17-year loans from the World Bank) or projects that are financially non-viable are eligible for tied aid (OECD, 1998). To further discourage the indiscriminate use of tied aid, the Arrangement requires a minimum grant element of 35% in all tied aid packages. A complementary agreement to the Arrangement, known as the *Ex-Ante Guidance for Tied Aid*, establishes key tests to determine whether a project is commercially non-viable. Within the Ex-Ante Guidance renewable energy projects and power projects not connected to integrated power grids are generally classified as financially non-viable. Thus, renewable energy and distributed power projects qualify for the use of tied aid (OECD, 1996).

More recently, the World Trade Organization negotiated an agreement that affects export credits. The World Trade Organization (WTO) Agreement on Subsidies and Countervailing Measures (SCMs) establishes that official export credits that are below market rates and whose costs are not recovered by Governments over the long-term, qualify as subsidies and are subject to sanctions under the WTO. The SCM Agreement, however, establishes a "safe haven" or exception for those governments and their ECAs that abide by the interest rate provisions contained in the OECD Arrangement. Countries that in practice conform to the OECD provisions will not be considered by the WTO to be conferring an export subsidy. A number of ambiguities arise from this exception. First, it remains unclear whether "cover" (insurance or guarantees) provided by export credit agencies fall under the exemption for export subsidies because the SCM agreement only mentions "interest rate provisions." Second, the SCM Agreement says nothing about the market windows operated by many ECAs (where they mix money borrowed at very low rates from their governments with money borrowed commercially and lend this on a commercial basis to companies). And finally no mention is made of whether tied aid packages as outlined in the OECD Arrangement, constitutes an export subsidy (Australian Department of Foreign Affairs, 2002).

This review of the OECD arrangement and WTO rules raises two important issues for individuals or parties interested in supporting a transition to renewable energy and more sustainable energy systems generally. First, although ECA financing can be used to support renewable energy and distributed power development it can currently only do so under very strict conditions. Projects must be financially non-viable to receive financing, must include a minimum 35% grant element, and can only be directed to the lowest income countries (thus eliminating many of the emerging market economies where ECAs do much of their power sector lending and business). In addition, the WTO Agreement on SCMs leaves open the possibility that the use of tied aid, insurance or guarantees for renewable or distributed energy projects could be ruled a violation of the WTO subsidy rule. This creates a complicated maze for renewable energy developers or exporters, ECA staff and governments to navigate should they attempt to negotiate a tied aid package.

B. ECAs and the Transition to a Sustainable Energy Future

ECAs should be of interest to individuals and organizations working to shift economic development patterns in a more sustainable direction for a number of reasons. First and foremost is the leverage ECAs exert over other additional private and public support to development projects. Second, ECAs concentrate their activities and lending in infrastructure development and manufacturing activities with large climate footprints. Through their lending, ECAs also influence the emissions- and energy-intensity of developing country economies. Finally, ECAs together with multilateral development banks can influence the environmental and social assessment procedures practiced by commercial banks and investment houses. These points are discussed in more detail below.

- Leveraging Power of ECA Financing

Investment insurers and banks, including the majority of G8 ECAs, are members of an association known as the Berne Union. The Berne Union estimates that its members co-finance or provide cover for anywhere from $300-$400 billion annually in exports and investments. The majority of this total, ($200-$340 billion) consists of short-term trade transactions that support exports of goods of services with a value of less than U.S. dollar one million. The remainder, anywhere from $60 to $100 billion per annum, is directed to longer-term transactions that support foreign direct investment and capital development projects (Berne Union, 2000). Over the last six years (1996-2001) total project financing to developing countries (concentrated largely in oil and gas development, infrastructure, and manufacturing) totaled $419 billion (ProjectWare, 2002). Of this total ECAs provided co-financing or cover for project's with financing valued at $146 billion (ProjectWare, 2002). This means that ECAs participated in roughly one-third of all project finance transactions destined for developing countries.

These figures are even more significant given their concentration in a few regions, and developing countries—ones with a significant role to play in addressing future climate change threats. Much like foreign direct investment (FDI), the majority of ECA financing for energy-intensive activities goes to just 10 countries (World Bank, 2000). Among the leading country recipients of ECA-financing are China, Indonesia, India, Mexico and Brazil with China and Indonesia leading the group (Maurer, 2000). This means that ECAs direct most of their financing to the emerging market economies with some of the largest emissions of greenhouse gases among developing countries and the world generally.

- ECA Support for Sectors with Important Climate Impacts

A significant share of ECA project financing directed to developing countries is concentrated in sectors that have important implications for climate change. These sectors include power generation projects, upstream and downstream oil and gas development, and energy-intensive manufacturing. For the period 1996-2001, Infrastructure, dominated by telecommunications, accounted for the largest share of ECA-supported transactions ($128 billion) followed by oil and gas developments ($98 billion), and power sector projects ($116 billion) (World Bank, 2001). These investments are building fixed capital that will remain in place for the next 10 to 50 years. Manufacturing equipment has an estimated average life-span of 10 to 40 years, pipelines, electricity transmission and distribution systems 25 to 50 years, and power stations 30 to 50 years (International Energy Agency, 2002). The significant lifetime of these capital structures is of particular concern given their contributions to greenhouse gas emissions.

Electricity and heat production accounted for 21-51% of 1999 carbon dioxide emissions in developing countries, and 38% on average of world emissions (Dubash, 2002). Table 1 lists electricity's average contribution to carbon dioxide emissions. Developing countries' industrial energy consumption accounted for 53% of their carbon dioxide emissions in 1995 (Price et al, 1999). Oil and gas production also contributes to emissions of GHGs. Methane leaks from natural gas pipelines were estimated at 10-20

million tons of methane (CH4) a year and natural gas flaring at oil wells for 202 million tons of carbon dioxide a year in the late 1980s. Most of these releases occurred in Africa, Asia and the former Soviet Union that operate older infrastructure and pipelines (Environmental Chemistry, 2002). In addition, Petroleum refining is a highly-energy intensive process that consumes both purchased energy (gas, electricity) and refining by-products. Energy consumption in refineries accounted for roughly 8% of global industrial energy consumption (12 EJ) in 1990 (Price et al, 2000). Overall, the energy sector is responsible for about three-quarters of humankind's carbon dioxide emissions, one-fifth of its methane, and a significant quantity of nitrous oxide (Environmental Chemistry, 2002).

Table 1. Share of Carbon Dioxide Emissions from Electricity and Heat Production (1999)

Region	%
Middle East and North Africa	26
Sub-Saharan Africa	50
South Asia	50
Latin America and the Caribbean	21
East Asia and the Pacific	39
Europe and Central Asia	51
North America	42
High-Income Europe	30
Other High Income	40
World	**38**

Source: Dubash, 2002.

Continued investment in and development of the energy sector promises to exert considerable upward pressure on global GHG emissions as energy demand grows. World demand for energy is projected to increase 57% over the next 20 years with China and other developing countries account for the largest increases in demand (International Energy Agency, 2002). Not surprisingly, the pace of energy-related investment is projected to triple over the next 20 years averaging $10-$19 billion per annum in transition economies and $67-$84 billion in developing countries, with the greatest flows going to East Asia, and Latin America (International Energy Agency, 2002).

- Influence Over Developing Countries' Emission Intensities

Industrialized country economies' energy intensities dropped 43% between 1973 and 1999. By contrast, improvements have occurred more slowly in developing countries where energy elasticity has been close to or above 1.0 for the last twenty years, meaning that that change in energy growth has occurred in line with the change in economic growth. Among developing countries, China presents an exception as in the last twenty years it has experienced elasticities of 0.5, meaning that incomes are rising twice as fast as energy use (Li and MacCleery, 1998). The limited improvements observed in most developing countries can be explained by the fact that energy-intensive industries are

shifting from industrialized to developing countries, and that low-levels of per capita consumption of energy are rising with increases in income.

To the extent that ECAs, through their co-financing of fixed capital, contribute to improvements in energy-efficiency and the displacement of older inefficient capital they can help accelerate reductions in the energy-intensity of developing country economies. This potential can only be realized, however, if ECAs pay attention to the technological choices, fuel mixes, and management practices of the projects they consider for financing. Because ECAs concentrate their financing in sectors with large climate change impacts incorporating an energy or climate change analysis in environmental assessment procedures to determine whether project proposals maximize energy-efficiency improvements is of singular importance.

- Influence Over the Environmental Practices of Private Financial Institutions

ECAs together with multilateral development banks can play a standard setting role for other financial institutions, particularly commercial banks and investment houses. Although ECAs (and banking institutions more generally) are late-comers to a project development process they still have a potential to influence the behavior of their clients in an upstream fashion. An increasing number of private companies and financial institutions are ensuring that large projects with significant environmental footprints or effects comply with the World Bank's environmental assessment procedures and pollution abatement handbook or that of other multilateral financial institutions (the European Bank for Reconstruction and Development for example). Financial institutions that expect external scrutiny of the environmental quality of their projects or foresee seeking some share of their financing from official sources are increasingly using such guidelines as a default standard. A recent survey of major lending institutions in Europe, North America and Oceania found that 24% of banks in Europe and North America that conduct environmental assessments rely on World Bank guidelines to conduct environmental assessments, while 3% follow OECD guidelines (UNEP's Finance Industry Initiative, 2002).

Harmonization of ECA and World Bank guidelines would produce an even greater upstream influence on the environmental risk and assessment methodologies employed by commercial banks. Given the recent crises in Argentina and the slow recovery of Asian economies from the financial crisis of 1997, ECAs' risk reduction function is more important now than in 1990s. This means that ECAs can potentially exercise greater leverage over private development capital entering emerging market economies, and the practices of private financial institutions.

C. Lack of Public Information on ECA Financing

Despite the significance of ECAs, both with regards to their role in project financing and their concentration in countries and sectors with important climate change implications, the general public, as well government agencies outside of ministries of finance, have little or no access to reliable information about ECAs. This information gap is critical in

two areas: (a) the lending practices and portfolios of individual ECAs, and (b) official statistics on export credit financing.

- Limited Information Disclosure by ECAs

A recent review of ECA environmental standards and environmental information disclosure (Urgewald, 2001) of 14 OECD ECAs reveals that the majority require environmental impact assessments (EIAs) for projects that are categorized as having significant environmental damages. Nevertheless, few of the ECAs surveyed (only 4) make public a summary or full report of the EIA findings prior to making a decision on whether to provide cover or co-financing to the project in question. Among these four ECAs, only two (Australia and the United States) release summary results of EIAs to the public and include a list of the specific projects to which they supplied financing in their annual reports. The remaining two ECAs (Canada's Export Development Corporation, and Japan's JBIC) have unclear policies with regard to information disclosure. Canada, under order from its parliament, formulated an information disclosure policy in early 2002 for the EDC. JBIC does not require the release of EIAs, but may be forced to do so by the passage of a national information disclosure act in 2001 (Urgewald, 2001).

The three German, Japanese and United States ECAs that were included in the survey of ECA information disclosure practices (Hermes, the U.S. Export Import Bank, and the Japan Bank for International Cooperation) fell at various ends of the spectrum with regard to information disclosure. The U.S. Ex-Im Bank releases project EIAs to the public 30 days prior to a Board decision to approve financing for a project, and also publishes a complete list of companies and projects, including the value of the financing granted, in its annual report. As noted above, JBIC may be forced to disclose project EIAs by new legislation, but otherwise does not voluntarily provide such information. Furthermore, it does not publish or otherwise list the specific projects and transactions it grants in any given calendar or fiscal year. Finally, Hermes has no requirements for EIAs, and does not disclose annually or otherwise information about the individual projects and associated financing. Hermes staff, state that they are prohibited from making any such disclosures because the criminal and civil codes make any and all disclosure of company information a criminal act. Hermes staff says they encourage German companies that are recipients of Hermes insurance to voluntarily disclose information to the public but that none of their clients have chosen to make information public.[1]

- Official Statistics on ECA financing

Compounding the lack of disclosure on the part of ECAs is the limited value of official statistics on export credits produced by the International Monetary Fund (IMF). Because export credits are considered official government liabilities or debts, information on export credit lending is collected and managed by the IMF. However, annual lending or cover supplied by ECAs cannot be easily tracked using IMF statistics because they are combined with other government transactions in a category known as other official flows (OOF). This category of flows combines structural adjustment lending, repayments of

official debt, and a number of other transactions in addition to export credits. Thus, it is virtually impossible to use OOF to track ECA financing. As part of its annual report, *Official Financing for Developing Countries*, the IMF usually includes a section on export credits. But this section is sometimes omitted or it provides only summary analysis. Furthermore, it contains no disaggregated information comparing export credits across lender countries or recipient. While the IMF's report provides an overall picture of export credits, it cannot be used to compare or analyze the performance of individual ECAs.

Section II. Export Credit Financing for Power and Fossil Fuel Development

This section of the report analyzes U.S., Japanese and German ECA financing for power and oil and gas projects during the last six year period (1996-2001). A previous analysis (Maurer and Bhandari, 2000) demonstrated that the ECAs of the G8 countries were the most important source of financing for all energy-intensive development activities during the mid 1990s. However, the analysis presented here is more narrowly focused on the ECAs of Germany (Hermes, KfW), Japan (JBIC and NEXI) and the United States (Ex-Im Bank and OPIC), and their participation in power sector and oil and gas projects in developing countries and economies in transition.

The information presented in this section relies almost exclusively on analysis derived from the results of a database search on ProjectWare, a proprietary database developed by Dealogic, a company based in London, United Kingdom. Its subscribers are for the most part commercial banks and investment houses active in project finance. None of the financing values supplied by the database is adjusted for inflation or any base year currency value.[2]

A. Overview of German, U.S. and Japanese ECA Financing for Power Generation and Oil and Gas Development

Before examining the ECA financing provided by Germany, Japan and the United States for power and oil and gas development, it is important to paint a broader picture of overall flows of project financing and ECA participation in these two sectors. The total value of the project financing flowing to these two sectors for the 1996-2001 period totaled $115.6 billion for power development and $97.8 billion for oil and gas development (ProjectWare, 2002). In the power sector, ECAs participated as co-financiers, insurers or guarantors in projects with financing valued at $50 billion. In the oil and gas sector, ECAs participated as co-financiers, insurers or guarantors in projects valued at $60.6 billion (ProjectWare, 2002). This does not mean ECAs provided US $50 billion and US $60 billion of coverage or co-financing. Rather, that ECAs provided some portion of the financing for projects valued at $50 and $60 billion.

Total financing directed to power sector projects that received some form of support from German, Japanese or US ECAs during 1996-2001 is US $31 billion. The value of the co-financing and guarantees these ECAs provided to projects in this sector is approximately $15.6 billion. The majority of this support came in the form of insurance

or guarantees valued at $9.2 billion. The value of the direct co-financing was $6.5 billion. In sum, ECAs from these three countries provided approximately 21% of the co-financing, and insured or guaranteed another 30% of the power projects in which they participated. These figures underestimate ECA contributions to these projects as they do not include the value of financing or cover provided by ECAs from other countries. Appendix 1 lists all power projects captured in the database that receive German, Japanese, and U.S. support.

ECA participation can be broken down into two main financial services: the provision of cover in the form of insurance or guarantees and direct co-financing via loans, special credit facilities or equity investments. Among the six ECAs, the principal sources of guarantees or insurance for power projects are the US Export-Import Bank ($3.72 billion), Hermes ($1.52 billion), OPIC ($1.4 billion), JBIC ($1.36 billion), and NEXI ($1.2 billion). KfW provided no insurance or guarantees. The most important sources of co-financing, again in order of importance, are JBIC ($2.5 billion), KfW ($2.2 billion), OPIC ($1.2 billion), the US Ex-Im Bank ($500 million) and NEXI ($102 million). Hermes provided no co-financing. Table 2 summarizes the contributions of these ECAs to power development financing.

Table 2. German, Japanese and U.S. ECA Financing for Power Projects in Developing and Transition Economies, 1996-2001 (US $ millions)

Country	ECA	Insurance/Guarantees	Co-Financing
Germany	Hermes	$1,520	
	KfW		$2,200
Japan	JBIC	$1,360	$2,500
	NEXI	$1,200	$102
United States	Ex-Im Bank	$3,720	$500
	OPIC	$1,400	$1,200
Total		**$9,200**	**$6,500**

Source: ProjectWare, 2002

The value of the financing for oil and gas projects that enjoyed some form of German, U.S. or Japanese ECA support for the period 1996-2001 is approximately US $34.87 billion. Of this share, ECAs from these countries provided a total of US $10.75 billion in cover and co-financing combined. This total is divided fairly evenly between insurance or guarantees ($4.88 billion) and co-financing ($5.87 billion). In sum, German, Japanese and U.S. ECAs co-financed 16.8% and guaranteed or insured another 14% of the projects where they played some banking role. Again, this underestimates the overall share of ECA financing in these oil and gas projects as it excludes ECA contributions from other countries. Appendix 2 lists all oil and gas projects captured by the database that received German, Japanese or U.S. support.

Among the six ECAs that are the focus of this study, the U.S. Ex-Im Bank provided the greatest share of the guarantees for oil and gas projects ($3.35 billion), followed fairly distantly by Hermes ($546 million), OPIC ($435 million), JBIC ($340 million), and NEXI ($201 million). By contrast, the greatest source of co-financing for oil and gas

projects was provided by JBIC ($3.8 billion) followed by KfW ($1 billion), the U.S. Ex-Im Bank ($545 million), NEXI ($295) and OPIC ($200 million). Hermes did not provide co-financing. Table 3 summarizes the contributions of these ECAs to oil and gas development.

Table 3. German, Japanese and U.S. ECA Financing for Oil and Gas Projects in Developing and Transition Economies, 1996-2001 (US $ millions)

Country	ECA	Insurance/Guarantees	Co-Financing
Germany	Hermes	$546	
	KfW		$1,000
Japan	JBIC	$340	$3,833
	NEXI	$201	$295
United States	Ex-Im Bank	$3,358	$545
	OPIC	$435	$200
Total		**$4,880**	**$5,873**

Source: ProjectWare, 2002.

B. Quality and Character of Power and Oil and Gas Projects Supported by US, German and Japanese ECAs

The quality and character of the power and oil and gas projects supported by the ECAs of Germany, Japan and the U.S. is difficult to establish clearly given the general lack of public information available with regard to the name and location of projects as well as their general sizes, production capacities, fuel mixes used, etc. The ProjectWare database that serves primarily as a financial database does provide some project details that make it possible to paint a rudimentary picture of the quality of the projects and investments ECAs support.

- Power Projects

The database identified 65 power projects for the 1996-2001 period that included German, US or Japanese ECAs as co-financiers or guarantors. A review of these projects reveals that this ECA financing helped or is helping to finance significant power generation capacity from coal- and gas-fired thermal plants generally, with some financing to large hydro-electricity projects, but little or no financing for nuclear plants, co-generation or renewable energy. The most consistent information provided by the database was the megawatts (MW) of electricity generation capacity of the proposed plant and the general technology or fuel type. Using this information, it is possible to estimate that this ECA financing will lead to the development of 10,228 MW of coal-generated electricity capacity, 9,056 MW of natural gas-generated electricity (of which 5,535 is combined cycle), 6,715 MW of thermal-generated electricity (no fuel type or technology was specified), and 623 MW of oil-fired electricity generation. By comparison, this financing will contribute to 345 MW of new hydro-electricity capacity, and 316 MW of geothermal or combined heat and power. Outside of geothermal plants, no renewable technologies, such as wind, biomass or solar were financed by this group of ECAs.

Renewable energy projects may not be captured by the database because of their relatively small scale, as well as the lower volumes of financing they require relative to conventional power projects. For the most part renewable energy projects do not rely on project finance, and generally do not qualify for the near market financing terms that ECAs extend. Although, many renewable energy projects that are commercially non-viable qualify for tied aid, the restrictions placed on what countries can receive tied aid as well as how much is to be given in grants limits its use for renewable energy technologies. The main source of financing for renewable in developing and transition economy countries is bilateral or multilateral aid. In only a small number of cases are export credits the primary source of financing for such projects.

- Oil and Gas Projects

A total of 34 oil and gas development projects with participation from German, Japanese or U.S. ECAs are listed in the database. These projects are generally directed to four types of activities: oil and gas field exploration and development, the upgrading and modernization of existing refinery facilities, the construction of liquid natural gas (LNG) plants, and the construction of oil and gas pipelines. The database generally contains information about the additional capacity that will result from the development of an oil or gas field, the construction of a refining facility or the transportation of oil and gas resources. However, this information is presented differently depending on whether the commodity in question is oil or gas, and the nature of the project. Thus added production capacity is expressed in thousands of barrels per day, thousands or millions of tons per year or millions of cubic feet (or meters) per day (or year). For a significant number of these projects no information is provided about added capacity, rather the description is limited to the number of new plants to be built or the length of a new pipeline.

Despite the difficulties of characterizing oil and gas projects, it was possible to determine that 12 of the projects involved the expansion or upgrading of refineries. If completed, these refinery projects should increase refining capacity by at least 318 thousand barrels of oil a day, add an additional 1.7 million tons of crude oil production per year, build 33 new refineries, and upgrade 15 existing facilities. 4 projects included gas field exploration and development could bring into production at least 848 million cubic feet of natural gas for approximately a 20-25 year period. 6 projects also involved oil exploration and development that should bring into production 63 million tons of oil per year, and additional 315 thousand barrels of oil per day. Approximately 10 of the projects included the construction LNG plants that could expand LNG production by 26 million tons per year, as well as an additional 800 million cubic feet per day. Finally, 6 of the projects included plans to build a total of 6,120 kilometers of gas and oil pipelines. One of these planned pipelines will single-handedly have the capacity to transport 16 billion cubic meters of gas per year. The others are of more modest size and generally transport less than 100 million cubic meters per year.

C. Top Developing and Transition Economy Destinations of German Financing for Power and Fossil Fuel Development Projects

As noted at the beginning of this report, ECA financing is generally concentrated in a very few countries. During this six year period the top recipients of guarantees and co-financing from these six ECAs for power projects and oil and gas projects varied considerably. In the power sector, Brazil, China, India, Indonesia, Mexico, the Philippines and Turkey are the top recipients of both guarantees and co-financing. Among these countries, Turkey received the largest shares of both the co-financing and guarantees, accounting for about one-quarter and one-sixth respectively of all ECA support in this sector. The vast majority of this financing is supporting the construction of either coal-fired plants (particularly in China) or gas-fired power plants, many of them combined cycle. Table 4 provides a summary of the leading country recipients of German, Japanese and U.S. ECA support for power development projects.

Table 4. Country Destinations for German, Japanese and U.S. ECA Financing for Power Projects in Developing and Transition Economies, 1996-2001

Country	Total Guarantees (US$ millions)	Country	Total Co-Financing (US$ millions)
Turkey	2436.6	Turkey	1020.7
Indonesia	1890	Philippines	775
Philippines	1037	China	640.5
Mexico	683	Mexico	553.80
China	670	Indonesia	494
Brazil	472	India	493
Thailand	425	Poland	372
Argentina	358	Brazil	365
Pakistan	283.9	Pakistan	241.21
Morocco	237	Thailand	221.80
Croatia	195.51	Morocco	200
Colombia	133	Argentina	160
Bahrain	100	El Salvador	106
Bangladesh	87	Russia	100
Dutch Antilles	78	Colombia	86
El Salvador	65	Dutch Antilles	82
Guatemala	29.3	Guatemala	82
Lebanon	20	Croatia	75.2
		Tunisia	72
		Dominican Republic	69.2
		Latvia	14.6
		Lebanon	12.5

Source: Project Ware, 2002.

Among Germany's two ECAs, Turkey and Indonesia received the lion's share of guarantees from Hermes while China and the Philippines were the leading recipients of KfW loans for power projects. Hermes insurance for projects in Turkey and Indonesia supported or are supporting the construction of both gas-fired and coal-fired power

plants. The same is true for KfW's lending for power projects in China and the Philippines, but in the former case it is exclusively directed toward coal-fired power plants, and in the latter case toward combined cycle natural gas plants. German ECA support, is not substantially different from that of the U.S. and Japanese ECAs with regard to the character or location of the projects they support.

In the oil sector Brazil, the Russian Federation, Mexico and Qatar are the most important destinations of ECA support. Brazil was by far the largest recipient of lending followed by Russia and Mexico. Brazil alone accounts for almost one-third of the total financing provided to oil and gas projects during this period. Largely for the construction of oil and gas pipelines and the development of offshore oil fields. The Russian Federation was the largest recipient of guarantees with Qatar was a close second. The insurance cover and guarantees provided for projects in Russia are going toward upgrading and expanding the production capacity of existing refineries and the rehabilitation of oil fields. In the case of Qatar, ECA financing is supporting the development of new gas fields, significant new capacity to produce LNG, and the pipelines and other infrastructure necessary to transport LNG. Table 5 provides a summary of the leading recipient countries of German, Japanese and US ECA support for oil and gas development projects.

Table 5. German, Japanese and U.S. ECA Support for Oil and Gas Projects in Developing and Transition Economies, 1996-2001

Country	Total Guarantees US $ millions	Country	Total Co-financing US $ millions
Russian Fed	$ 1,160	Brazil	$ 2,257
Qatar	$ 1,020	Russia	$ 854
Mexico	$ 666	Mexico	$ 802
Trinidad &Tobago	$ 480	Malaysia	$ 651
Venezuela	$ 365	Indonesia	$ 355
Indonesia	$ 340	Pakistan	$ 299
Ghana	$ 320	Venezuela	$ 200
Pakistan	$ 201	Bolivia	$ 104
Chad	$ 200	Kazakhstan	$ 98
Oman	$ 200	Uzbekistan	$ 89
Algeria	$ 135		

Germany's export credit agencies are providing significantly less assistance for oil and gas development relative to the Export-Import Bank of the United States and the Japan Bank for International Cooperation. Hermes total support equaled just under $546 million and KfW's lending just over $1 billion. This is far less than the $3.3 billion in guarantees, and the $3.8 billion in co-financing provided by JBIC and Ex-Im Bank respectively. Hermes and KfW support for oil and gas development was limited to two refinery projects in Mexico, an LNG and gas field development in Qatar, the development of a large oil field in Kazakhstan, and the construction of a 1,250 kilometer gas pipeline in Russia.

Given the concentration of projects in a very few countries, it is misleading to present a general breakdown of ECA support from Germany, Japan and the U.S. by geographic region. It is more appropriate to list the leading destination countries within each region that receive the lion's share of this support. Below, the top three country destinations for ECA financing from Germany, Japan and the United States are listed for each region.

- Russia and Economies in Transition
  - Russia ($2.1 billion, rehabilitation of refineries, oil fields and construction of pipelines)
  - Poland ($372 million, combined heat and power plant)
  - Croatia ($270 million, power plant)

- Latin America and the Caribbean
  - Brazil ($3.1 billion, gas pipeline, oil and gas field development and both hydro and gas-fired power plants.
  - Mexico ($2.7 billion, refineries, and power plants)
  - Venezuela ($565 million, LNG plant, and natural gas injection facility

- North Africa and the Middle East
  - Qatar ($1 billion, new LNG plants and gas field development)
  - Morocco ($237 million, coal-fired power plant)
  - Oman ($200 million, LNG plant and pipeline)

- Sub-Saharan Africa
  - Ghana ($320 million, development of off-shore oil and gas fields)
  - Chad ($200 million, construction of oil pipeline)

- South Asia
  - Pakistan ($741 million, oil, coal and gas-fired power plants and oil refinery).
  - India ($565 million, expansion of gas pipeline capacity and regasification plant)
  -
- East and South East Asia
  - Indonesia ($3.1 billion, coal and other thermal power plants, plus LNG processing expansion and upgrade)
  - Philippines ($1.8 billion, gas fired, coal and geothermal power plants)
  - China ($1.3 billion, coal fired power plants)

- Europe/Western Asia
  - Turkey ($3.457 billion, construction of coal and gas fired power plants)

The above totals for each country equal the value of all ECA loans, insurance or guarantees provided to both power and oil and gas projects. Examined from a regional

perspective, the countries of Latin America, and East and Southeast Asia were the most important destinations for ECA support. This reflects the larger trends observed in general project financing. By contrast, Sub-Saharan Africa, and the countries of North Africa that are not oil producing received very limited ECA support. Turkey, a country that straddles Europe and the Middle East was the single largest recipient of ECA support from Germany, the U.S. and Japan. The reason for the emergence of Turkey as a major destination of ECA support is unclear, but may be driven by its proximity to Europe, and its rapidly rising demand for power.

III. Government Negotiations of Environmental Policies and Guidelines for ECAs

A. OECD Negotiations of Environmental Guidelines for ECAs

Calls for the development of ECA guidelines within the OECD began to occur in the mid 1990s as the growth and relevance of ECA-financing became apparent to environmental ministers and bilateral aid agencies. The OECD's Development Assistance Committee (DAC), which brings together all OECD development aid agencies to coordinate aid policies and grant-making, was one of the first group of policy-makers to call attention to the disparities between the DAC's own social and environmental guidelines and the general inconsistency or absence of such guidelines among ECAs. A DAC task force produced a report titled "Practical Guidance on Environmental Assessment for Development Co-operation Projects" in May 1996 raised concerns about the environmental and social impacts of export credit financing:

> There was widespread concern among the Task Force regarding the general lack of environmental guidelines applied to the development activities of the bilateral commercial lending and credit agencies . . . Virtually every Member cited examples where the lack of appropriate environmental planning of projects funded by such organizations had caused significant ecological and social problems. They were of the opinion that the environmental damage resulting from such ventures far outweighed the damage caused from lack of coherence among bilateral donors."

Two other inter-governmental processes, however, ministerial meetings of the OECD and ministerial and heads of state meetings among the seven (now the eight) largest industrialized economies were crucial in establishing a mandate for the negotiation of common environmental approaches and guidelines for ECAs. These countries are known as the G7 and G8. The first formal recognition of the relevance of ECAs to the environment occurred at the 1997 G7 Summit held in Denver, Colorado. The final communiqué of the Denver summit recognized the potential impact of private sector financial flows from industrial nations on sustainable development, and called for governments to consider such impacts when they supported investments in infrastructure and equipment exports. In 1999 the ministerial meeting of the OECD established a mandate for OECD ECAs to negotiate common approaches for export credits. The same year, the G8 Summit in Cologne the heads of state agreed to negotiate a set of common environmental guidelines among by the 2001 G8 summit. "We will work within the

OECD towards common environmental guidelines for export credit agencies. We aim to complete this work by the 2001 G8 Summit."

Both the OECD mandate and the G8 mandate were delegated to the OECD's ECG Working Party. In 2000, heads of state at the Okinawa G8 summit elaborated on the Cologne mandate by stating that common environmental guidelines for ECAs should draw on relevant MDB experience. The Okinawa G8 communiqué also mandated the creation of a task force to study how to accelerate development of renewable energy in developing countries.

Since 1999, members of the ECG, consisting almost exclusively of export credit agency representatives and government officials responsible for export credit policies, have attempted to negotiate a single set of approaches or guidelines that fulfill both the OECD and G8 mandates. The negotiations have had to address small OECD countries' concerns about the costs and requirements common approaches would impose on their ECAs and larger OECD countries' concerns that such approaches might impose new restrictions on their export supports. The negotiations have also encountered a tension between the OECD's call for common approaches that generally allows for a less specific and more general interpretation of common environmental practices, and the G8 mandate that implies a more specific set of procedures and standards. In the negotiations some governments have emphasized common approaches while others the need for specific guidelines.

As of June 2001 the ECG had failed to produce the *consensus agreement* that is necessary to officially fulfill the OECD and G8 mandates. Currently 24 of the 26 members of the Working Party endorse the existing draft text setting out common environmental approaches. This draft is known as "Revision 6." Two countries, the United States and Turkey, did not accept the Revision 6 draft. The former because the draft did not establish binding procedures and standards equivalent to international best practice among international financial institutions (e.g., the World Bank or the EBRD, for example), and failed to include public disclosure of EIA findings. The Turkish government did not accept the draft text because it imposed standards that the government believed were too onerous or stringent for its ECA to implement. In 2000 and 2001 Turkey's government also faced an uphill battle to gain ECA guarantees and co-financing for a number of controversial projects that were being contested on the grounds that they produced irreversible social, cultural and environmental damages.

The main points of contention in the negotiations, largely represented by the United States on one side and other OECD and G8 countries on the other centered on two issues: (a) what existing environmental assessment standards and requirements should serve as the basis or model for ECAs own standards, and (b) what information should ECAs disclose to the public and affected communities about the potential environmental impacts of the projects that will receive some form of ECA support.

The Revision 6 draft requires ECAs to categorize projects and to carry out environmental impact assessments for projects in particular categories. However, the agreement allows

ECAs or project sponsors to follow a project environmental assessment procedure or standard of its choosing. This is known within the ECG negotiations as the benchmarking approach. Under the benchmarking approach, the environmental assessment can follow World Bank standards or a host country's environmental standards, among others.

The draft agreement contains no requirements for disclosure of benchmarking exercises or environmental impacts assessments to the public before the ECA makes a decision to guarantee, provide insurance coverage or make a loan to a project. Finally, the draft agreement contains no requirements for consultation with affected communities in the project location. As such, the results of an assessment, even if they follow World Bank procedures, are only for the information of project sponsors and the ECA staff, and cannot inform public or policy debates.

None of the environmental procedures or standards that were debated within the ECG Working Party (regardless of whether they are binding or simply used as benchmarks) evaluates project impacts on the climate system or contributions to energy-efficiency improvements. Furthermore, there was no discussion within the ECG of reporting on projects' estimated or potential contribution to greenhouse gas emissions over time. Regardless of how the current ECG stalemate is resolved, it will produce little or no change in lending to energy-intensive sectors and projects. However, a single binding standard that could be revised to incorporate a climate or energy assessment component would facilitate addressing these concerns in the future.

- German Government Position

Staff at the Ministry of Foreign Relations and Hermes endorses the Revision 6 draft, and believe it represents an enormous step forward for ECAs. According to Hermes staff, the current Revision 6 draft, includes an agreement by members of the ECG to revisit the common approaches or guidelines again in 2003. They see the U.S. government's failure to endorse the current draft as counter-productive because the common approaches will be revisited in the near future.[3]

In supporting a benchmarking approach, Hermes staff interviewed for this report emphasized the need to preserve their flexibility in extending export credit insurance. A binding standard would reduce Hermes ability to make reasonable exceptions to particular environmental requirements, possibly limiting their ability to cover German exporters. Hermes staff also stated that in practice they apply World Bank standards to most of their projects, so they are not opposed to this standard per se. They also pointed out that the World Bank itself often makes exceptions to its own procedures and standards. [4]

According to Hermes staff, they cannot support inclusion of information disclosure requirements in the common environmental approaches negotiated by the ECG because Germany's civil and criminal codes prohibit disclosure of any and all company information. Disclosure of what companies and projects receive Hermes coverage

would, according to this staff, result in a criminal violation. Pressed as to whether Hermes might requires that companies seeking their insurance coverage to agree ex-ante to voluntarily disclose EIA findings or other information, staff interviewed stated this would not be legally possible. Finally, staff interviewed indicated that a decision to support renewable energy technologies is inherently a political decision.[5] If export credits are to support renewables, it will require a revisiting of the OECD *Arrangement on Guidelines for Officially Supported Export Credits* and the *Ex-Ante Guidance for Tied Aid* to consider both the length of repayment period, interest rates, and risk assessment criteria. Generally, however, Hermes staff do not believe their institution is the appropriate vehicle to direct support for renewable energy.

Civil society groups from England, France, Germany, Italy and the United States pressing for ECA reform argue that the adoption of Revision 6 of draft text would violate the spirit of the G8 and OECD mandates. Revision 6, according to these groups, would not establish a common standard, but allow ECAs to follow any standard of their choosing. Appendix 3, a letter to the Italian Prime Minister before the 2001 Genoa summit summarizes civil society groups' major concerns with the Revision 6 draft endorsed by 24 of 26 OECD countries.

B. G8 Renewable Energy Task Force

Heads of state at the 2000 G8 Summit established the G8 Renewable Energy Task Force (RETF) in Okinawa. The Task Force was asked to identify actions that could be taken to promote a step change in the supply, distribution and use of renewable energy in developing countries, and to present its findings at the 2001 G8 Summit in Genoa. The task force was co-chaired by the Director General of the Italian Department of Environment and Territories, Dr. Corrado Clini, and the former Chairman of the Committee of Managing Directors of the Royal Dutch/Shell, Sir Mark Moody Stuart. The Task Force was composed of members from G8 countries as well as from 12 non-G8 countries. The RETF's work was informed by an Advisory Group of experts, as well as outreach events held in 17 countries inviting input and comment.

The Task Force encouraged G8 governments to give a high priority to triggering a "step change," meaning a significant expansion, in the development of renewable energy markets for the benefit of the 2 billion people currently without access to reliable energy services. In consultations between members of the RETF and G8 governments during 2000 and 2001, the ambitious scope of the Task Force took some G8 governments by surprise. Two governments in particular, the U.S. and Canada were not receptive to the wide scope and ambitious goal set by the task force.[6] Given their co-chairmanship, the governments of Italy and the United Kingdom were more receptive to the task forces ambitious goals and scope.[7] Despite these tensions, the task force maintained its ambitious agenda and worked toward a final report by July 2001.

Among the Task Force's main conclusions, two in particular are relevant to ECAs. First that innovative financial systems are required in order to achieve the necessary loan and fund mobilization for renewable energy in developing countries. This will require

governments, industries, NGOs, and the international financial institutions (IFIs) to cooperate to find ways to generate up front funding of renewable energy systems. Such up front financing is already available for conventional energy. Second that there is a need to mainstream sustainable energy in all relevant areas of development cooperation. Criteria of energy efficiency, sustainability, local employment creation and wherever practical, the total cost of energy (including distribution and infrastructure costs) need to be taken into account. This will require enhancing institutional capacity within international agencies and banks (G8 Renewable Energy Task Force, 2001).

Section 3.4 of the RETF report addresses financing for renewable energy. A significant focus of this section is the need to align IFI and ECA goals with renewable energy development. More specifically, Recommendation 3.C.3 of the report calls on OECD countries to take two actions with respect to ECAs. First, that ECAs extend "sector arrangements" contained in the *Arrangement on Guidelines for Officially Supported Export Credits* to renewable energy projects. These sector arrangements essentially allow extended repayment periods of 12 to 15 years for nuclear power projects and dams. Second, the RETF report recommends that OECD ECAs adopt common environmental guidelines, and suggests that these guidelines include minimum standards for energy-efficiency or carbon-intensity, and common reporting methodology for ECAs that would permit an assessment of their local and global environmental impacts (G8 Renewable Energy Task Force, 2001).

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- German Government Position

The RETF report received a mixed reception at the 2001 G8 Summit in Genoa. The U.S. and Canadian governments worked to minimize the influence of the task force report on the communiqué language that emerged from Genoa. Other governments, notably Japan and Germany, did not express any opposition to the RETF report, but also made no particular effort within the G8 deliberations to endorse or incorporate any of the RETF recommendations into communiqué language. Italy and the UK, while supportive of the Task Force, were unable to generate sufficient support or interest from other G8 governments. As a result, the 2001 G8 Summit communiqué simply thanks the task force for its work and states that its recommendations would be taken up at the 2002 meeting of G8 Energy Ministers.

The G8 Energy Ministers meeting took place May 2-3, 2002 but neither its report nor other public communications about the meeting make any specific mention of the RETF report. Nor does the official report of the meeting devote more than a small section to the topic of renewable energy (G8 Energy Minister's Meeting, 2002). To date, G8 governments have largely ignored the RETF report recommendations. This represents a significant step back from the Okinawa mandate that created the Task Force.

Interviews with staff at the Ministry of Foreign Relations and Hermes indicate that the G8 Renewable Energy Task Fore report is either unknown to them, or if known it is not seen as requiring serious consideration because it is purely advisory in nature.

Furthermore, one interviewee stated that the agreement by 24 of 26 OECD countries to abide by Revision 6 of the draft text on common approaches and guidelines essentially fulfills one of the report's recommendations: that OECD countries negotiate common environmental guidelines.[8] This ignores the fact that Revision 6 draft does not contain any of the specific elements outlined in RETF recommendation 3.C.3, namely incorporation of an energy-efficiency or carbon-intensity standard, and development of a common reporting methodology.

IV. Aligning ECA Financing with Sustainable Energy Development

Actions to Align ECA financing and Sustainable Energy Development are needed at both national and international levels. Thus, the recommendations that follow are designed to address what actions should or can take place at national levels, within the OECD and in the Context of the G8.

A. Recommendations for ECAs

Improvements in ECA environmental assessment practices have come about largely as a result of domestic pressure for reform in individual countries. The negotiation of common environmental standards within the ECG has had only limited influence on ECA practices. In particular, national parliamentary or legislative inquiries into ECA policies and practices have produced the most significant change. For example, the Canadian parliament's 2000 inquiry into the Export Development Corporation's (EDC's) environmental review procedures and information disclosure practices forced the EDC to rewrite its environmental policies and to establish an information disclosure policy. Advocacy efforts by civil society groups at national levels have also led to dialogues that have eventually resulted in policy changes within ECAs. In the United States, a recommendation by an advocacy group that the Export-Import Bank create a committee to study how it might better support renewable energy projects led this ECA to create a Renewable Energy Advisory Committee (REAC) that convened for the first time in early 2002.

Given this history of ECA reform, civil society groups, legislators, and stakeholders in government agencies or institutions interested in facilitating or generating greater ECA support for renewable energy should work for the following changes in ECA environmental assessment practices at their national levels.

- Disclosure of ECA Support for Exports or Projects

A first essential step is to better understand what exports and projects ECAs currently support in the energy sector. This reporting should be detailed enough to allow the public to identify the share directed to particular power generation technologies, the fuel mix to be developed or employed, and planned production or generation capacity over a given time period. Public information of such information is essential to ensure that ECA staff enters into a meaningful public dialogue about the quality and direction of the

exports or projects they support in this sector. Such reporting does not violate laws protecting company confidentiality, as such information can remain protected.

- Full-Cost Energy Assessments

A second step is for ECAs to conduct or require a project sponsor to incorporate a full cost assessment of energy projects or those that are classified as energy-intensive (cement, iron and steel, pulp and paper, and petrochemical manufacturing). Such a full cost assessment considers the life cycle cost of the project, and identifies those infrastructure, social and environmental costs that are external to the project. Although such an assessment is more useful when energy development choices are made upstream in a decision-making process it can help identify actions that project sponsors can take to internalize social and environmental costs. Such an assessment would also be useful for ECA staff, as it would place the individual project in a larger context, and provide information they could use whether the project contributes to sustainable development.

- Reporting on Energy-Efficiency and Carbon Dioxide emissions.

In the long-term a credible assessment of the contributions ECAs are making to support a transition to more sustainable energy systems and infrastructure will require the development of indicators or measures that can be used to track their progress over time. Such measures will also allow a balanced evaluation of whether it makes most sense to promote renewables or to include efforts to improve the energy-efficiency of more conventional energy infrastructure. Such evaluations require a shared metric that is coherent both across ECAs, but also other reporting and metrics development efforts currently under way. Key among these is the work of the Inter-Governmental Panel on Climate Change (IPCC), the Global Reporting Initiative (GRI), and preliminary work by the European Bank for Reconstruction and Development (EBRD) to develop a project-based carbon dioxide emissions reporting methodology.

Key factors that such a methodology should seek to measure are the emissions to be generated by the development project during its construction, the cumulative emissions it is likely to generate during its lifetime, and emissions it is likely to displace or eliminate. Because measurement of emissions will vary depending on the project and industrial sector, the methodology should be limited to projects of a significant size (e.g. plants with a given production capacity), and a limited number of sectors. This will ensure that the reporting requirement is not overly burdensome or ECAs and its private sector clients.

- Portfolio Targets

Portfolio targets have been used by financial institutions for non-environmental or social goals as a way to diversify the risk profile as well as the asset quality of their financial holdings or liabilities. For example, holdings or debts with higher return and higher risks are kept to a certain percentage of a portfolio and balanced with lower risk and lower holdings. Over the long-term this improves the returns but lowers the risk to the

financial institution. Portfolio targets can also be used to manage the environmental quality or risks of ECA exposures.

This said, portfolio targets should be carefully designed to be both realistic, and to emphasize environmental characteristics or outcomes rather than particular technologies or types of projects. It is self-defeating to require ECAs to set a target of 5% or 10% renewable energy projects if few such projects qualify for ECA financing, or if projects that do not involve renewable energy, but which contribute significantly to reducing future greenhouse gas emissions, are excluded. For example, co-generation plants or combined heat and power projects would be excluded by a target aimed exclusively at renewable energy. A target for renewable energy may still be desirable to create incentives for ECAs to seek out such projects. In such cases, the portfolio target should include a clear definition of what constitutes renewable energy (exclude or include large hydroelectric projects for example). It should set realistic goals for the time frame, the number of projects, and volume of financing. Finally, renewable energy projects should meet specific social and environmental criteria. In other words, it should not be assumed that any and all renewable energy projects are desirable.

B. Recommendations for the OECD Negotiation of Common Environmental Guidelines for ECAs

To the extent that the ECG Working Party within the OECD builds on the strongest practices among its member ECAs it can contribute to raising the quality of both policies and practices among its members. Unfortunately, the OECD can also act as a venue where the negotiation can have the opposite effect, establishing the weakest ECA policies and practices as the standard. Of the three recommendations outlined below the first is procedural, and would help establish incentives for upward rather than downward harmonization. The other two are substantive.

- Open ECG Negotiation Process to External Parties

ECAs are institutions staffed and led primarily by banking experts and professionals. As such, representatives of ECAs have struggled to negotiate environmental guidelines that are credible to external environmental and social experts. Although Revision 6 of the draft guidelines is viewed as an acceptable or strong norm by 24 of 26 members of the ECG Working Party, it generally receives very few endorsements outside of the OECD. The OECD's own trade union advisory committee, TUAC, is quite critical of the existing guidelines, as are a host of civil society organizations, bilateral development agencies, and staff at multilateral development banks.

The ECG negotiations and Revision 6 of its draft common approaches and guidelines lack credibility because they have been developed without the input or participation of external experts and stakeholders. Essentially, ECAs are defining the environmental standards to which they will be held without external input. It is not surprising that the vast majority of ECG Working Party members do not wish these rules to be too different or more onerous than the ones they have in place nationally.

The ECG negotiations need to be opened to include representatives from other national and multilateral public institutions that have a stake in ECAs environmental guidelines. These include multilateral development banks, bilateral development agencies, and representatives of national environment agencies or ministries. Other stakeholders are developing country governments that must carry considerable debt burdens that result from failed ECA projects, and representatives of civil society organizations from both the leading sources as well as destinations of ECA financing.

- Incorporate Carbon Dioxide Reporting and Energy assessments in ECA Guidelines

This recommendation is closely linked to two recommendations detailed above and directed to individual ECAs. Although it is important for governments and their ECAs to begin taking individual actions to develop their own capacities to assess the energy and climate dimensions of their financing activities, the OECD can play a crucial role in facilitating that process. The OECD can establish coherence among different reporting or assessment procedures developed nationally or it can assume a leadership role in the creation or definition of climate and energy assessment and reporting standards for ECAs. Given the OECD's current role as a facilitator of negotiations among ECAs, it is more likely to limit its efforts to harmonizing emerging standards.

In its capacity as a facilitator, the OECD should seek to identify both what ECAs are currently doing to assess climate impacts, and to what if any climate reporting or assessment standards are emerging among multilateral as well as private financial institutions. Over the long-term, the ECG Working Party within the OECD should use such information to begin to exploring with its members how to incorporate a carbon dioxide reporting standard and a climate and energy assessment component into future guidelines for ECAs. Given the current lack of consensus on Revision 6, the ECG Working Party is unlikely to take up this issue in the short-term. If the OECD process is opened to participation by outside experts and stakeholders, however, this gap in the ECA draft guidelines will be raised sooner rather than later. Regardless, the Working Party and its members must eventually face this issue, and should begin the necessary preparatory work.

- Map Barriers to ECA Financing for Renewable Energy

Although the G8 Renewable Energy Task Force identified many of the barriers to financing renewable energy projects, additional barriers exist that are particular to ECAs. Some of these barriers relate specifically to the Arrangement on Officially Supported Export Credits, which includes the terms it establishes for insurance, guarantees and lending, as well as the limitations it sets on the use of tied aid. Other potential barriers relate to the WTO rules on subsidies and countervailing measures, which are not completely clear on when an export credit is or is not a subsidy subject to WTO penalties. Finally, another barrier is the tendency for bilateral aid to compete with rather than complement private financing and export credit financing. Bilateral aid agencies tend to

provide grant funding for demonstration renewable energy projects. Aid agencies rarely target grants to fund up-front costs a bank is unwilling to pay (developing viable business and financial plans for example), or those elements of a renewable energy project (capacity-building, regulatory reform to establish a level playing field for renewable) that should be paid with public money. Such a cataloguing or mapping exercise by ECAs collectively, would go a long way to identifying specific actions ECAs might take to make their financing accessible to renewable energy project, as well as specific changes or additions that should be made to the *Arrangement on Guidelines for Officially Supported Export Credits*.

C. Recommendations for the G8

In its analysis the RETF report estimates that national plans and proposals for renewable energy in developing countries could reach 50-70 GW between 2000 and 2010. Development of that renewable energy will require approximately $40-$60 billion in investments. Although the bulk of the financing would be provided by the private sector, about 20% (one-fifth) would need to be provided as concessional financing to address the disparity in costs between renewable and conventional sources of energy. This translates to $8-$12 billion in investments or $800 million to $1.2 billion per annum during the decade.

ECAs can potentially act as bridges to help mobilize the commercial and concessional financing the RETF identified as necessary. For ECAs to play this bridging role, however, will require governments to renegotiate the tied aid rules outlined in the OECD's Arrangement *on Guidelines for Officially Supported Export Credits* as well as the *Ex-Ante Guidance for Tied Aid*. The reason for addressing tied aid in this section is that re-negotiation of the rules on tied aid requires the political interest and support of G8 governments. If the G8 governments cannot make such a commitment then it cannot move forward within the OECD. Furthermore, it is unlikely ECAs can play the supporting role envisioned by the RETF if these rules are not re-negotiated.

- Renegotiate Export Credit and Tied Aid Agreements.

Although *Ex-Ante Guidance for Tied Aid* states that renewable energy projects that are not commercially viable are eligible to receive tied aid (OECD, 1996). This allowance has not proven sufficient to direct any significant amounts of export credit financing to renewable energy projects. Reasons for this have already been discussed above, but include restrictions on what countries are eligible for tied aid, and requirement that at least 35% of any tied aid project must take the form of a grant. Furthermore, although the Arrangement sets out more favorable repayment terms for particular sectors, such as aviation, nuclear power and dams, these do not extend to renewable energy projects. A separate sector arrangement should be established for renewable energy projects, which like projects in the nuclear, dam and aviation industries, have particular financing requirements.

New tied aid rules will need to avoid repeating past mistakes. In the past, tied aid distorted credit markets, and led developing countries to accept unwanted or inappropriate equipment, goods or services. Therefore, the aid element of any tied aid package should be directed to financing components of a project that if covered by grant money can reduce the long-term financing costs of a project, and fund costs that are essentially public in nature. Export credit financing in any tied aid package should cover all the commercially viable components of project, including services and equipment supplied by exporters. In essence, new tied aid rules should set the parameters for how purely commercial, ECA and grant aid might be married or joined together to complement rather than compete with one another.

- Incorporate Carbon Dioxide Reporting and Energy assessments in ECA Guidelines

This recommendation is raised again in this section because it was also emphasized in the RETF report. In the case of the RETF the suggestion that ECA guidelines adopt carbon dioxide reporting and incorporate methodologies to assess global environmental impacts was probably made because of their potential to level the playing field for renewable energy projects and exports. Conventional energy systems currently dominate ECAs portfolios. Thus, common environmental guidelines that include a such reporting and assessment components would bring to light the lower environmental risks posed by renewable energy projects, as well as the fact that from a life-cycle perspective renewable energy projects have lower external costs.

V. Conclusion

An ECA role in the transition to more sustainable energy requires more than good will, interest and positive action by the ECAs. Export Credit Agencies respond to government directives and priorities from economy and finance ministries as well as foreign ministries responsible for international negotiations. Policymakers at the highest levels of these agencies must take up the issues of ECA reform and renewable energy development. Just as important, environmental constituencies at domestic and international levels must engage in the ECA reform debate, and make renewable energy development a political priority. Without higher level political attention to and broader public debates on these matters, it is unlikely that the current political dynamic within the G8 and the OECD will change.

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Endnotes

[1] Not for attribution interview with Hermes staff. June 26, 2002..
[2] The database incorporates financing information about each project individually and uses exchange rates in effect at the time the entry is made into the database. This does not permit more consistent adjustments for currency or exchange rates or adjustments for inflation.
[3] Not for attribution interview with Hermes staff June 26, 2002, and response to email questions on a not for attribution basis by Ministry of Foreign Relation staff. July 3, 2002.
[4] Not for attribution interview with Hermes staff. June 26, 2002
[5] Not for attribution interview with Hermes staff. June 26, 2002
[6] Bassed on discussions with State Department repreesentatives in NGO meeting. Summer 2001. Washington, D.C.
[7] Based on informal discussion with member of RETF attending the Fourth Preparatory Conference of the World Summit on Sustainable Development. June 5, 2002. Bali, Indonesia.
[8] Not for attribution interview with Hermes staff June 26, 2002, and response to email questions on a not for attribution basis by Ministry of Foreign Relation staff. July 3, 2002.