NAMA Financial Mechanisms

Issues to be Considered

Brad Johnson

Center for Clean Air Policy

Objectives of NAMA Financial Mechanisms

- Expand availability of commercial financing of clean energy projects
- Use NAMA funds to attract private sector financing for climate change projects
- Use NAMA funds to mitigate project risks that are difficult to cover by the private sector
- Use or blend NAMA funds with private sector funds to make projects affordable

NAMA Financial Mechanism Design Criteria

- **Sustainability** – NAMA's should be used in a revolving manner. Use donor resources wisely.
- **Leveraging capabilities** - Capacity to bring in private sector financing for every dollar of donor funding. Mobilize as much private financing as possible with limited donor resources.
- **Affordability** - Financing climate change projects exclusively with private sector financing is not affordable in most countries. NAMA funds should leverage private sector financing on affordable terms to project sponsors and developers.

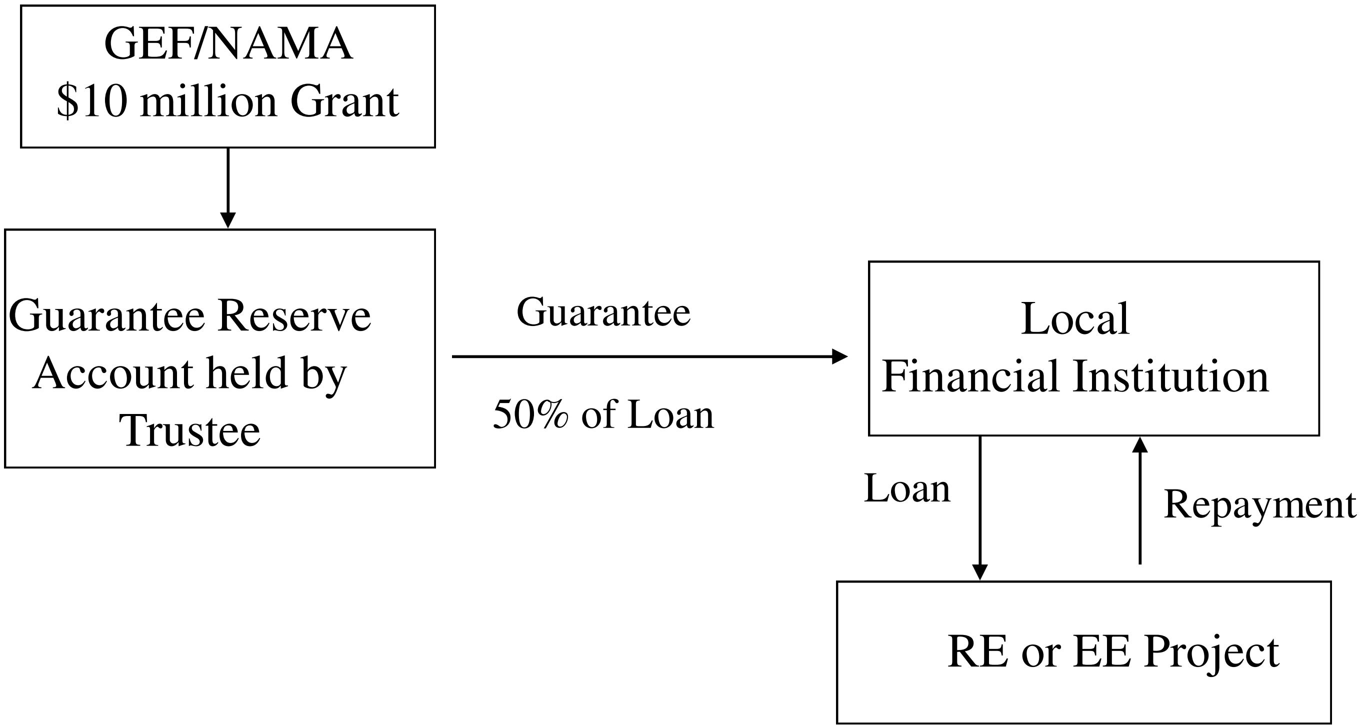
Financial Impediments

- Lack of knowledge of renewable energy (RE) and energy efficiency (EE) technology by local banks
- High perceived credit risk of developers
- Local bank preference for balance sheet financing while energy projects are usually financed based on revenue flow - project financing mechanisms
- Currency risk
- High transaction costs for smaller-scale projects
- Affordability – high interest rates in many countries can not be covered by project revenues

Partial Credit Risk Coverage

- Provides partial guarantees to local banks, up to 50%, for lending to climate change projects
- Designed to stimulate local financing of eligible projects
- Has been used with mixed results by the Global Environment Facility (GEF)
- Shown to have limited leveraging capacity
- Limited application in high interest rate environments

Partial Credit Guarantee



Issues

- Leverage
- Eligible Projects
- Interest earned on reserve account

Performance Guarantees

- Proposed for energy efficiency projects
- Provides lenders a guarantee of projected savings in an Energy Services Company (ESCO) contract
- Would make payment equal to the difference between guaranteed and actual energy savings from a project
- Takes performance risk off the table for lenders with limited understanding of the ESCO business
- Has higher leveraging capacity

Two Primary ESCO Business Model

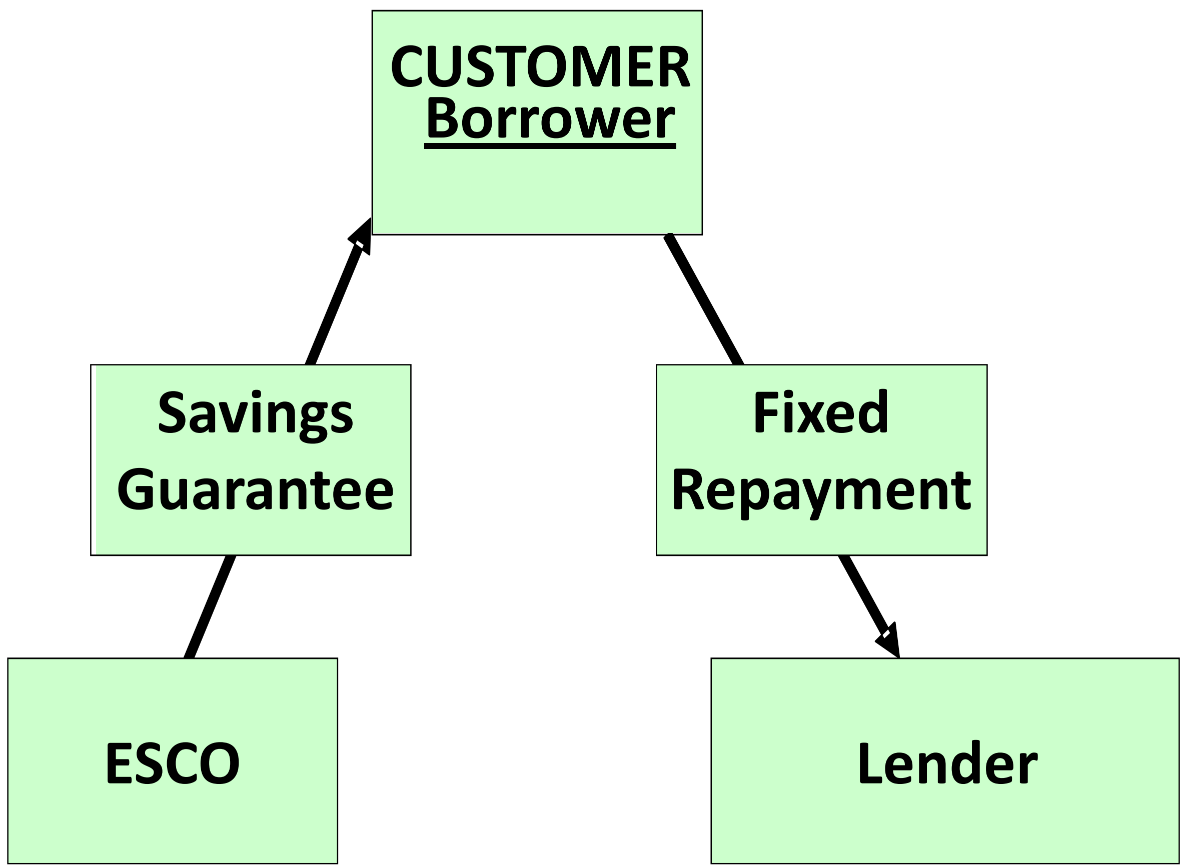
Guaranteed Savings

- Preferred by ESCOs
- Works best with start-up ESCO industry

Shared Savings

- Preferred by customer
- Off balance sheet to ESCO customer

Guaranteed Savings



Shared Savings

Customer

ESCO
Borrower
Performance &
Credit Risk

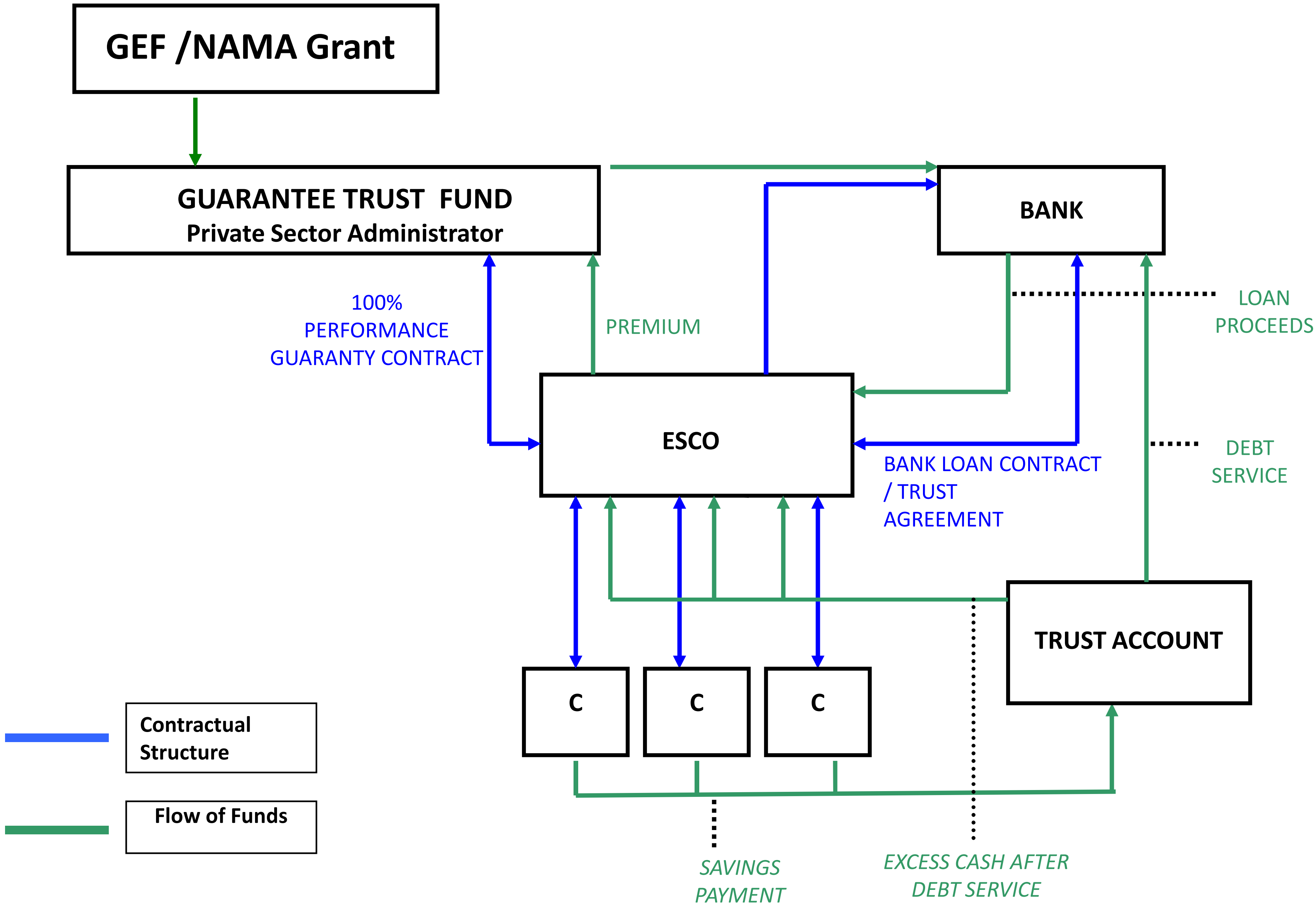
Lender Funding

Two Elements of all RE and EE Project Risks

- **Credit risk** – capacity of ESCO or RE client – hotel, industry, utility to repay loan. Evaluation of this risk is core business of commercial banks. **Credit Guarantee**

- **Project risk** – capacity of project to achieve level of energy production or guaranteed energy savings. Evaluation of this risk is beyond the core capacity of commercial banks. **Performance Guarantee**

Flow of Funds and Contractual Agreements
100% Performance Risk Guarantee Program



Creation of Special Funds to Finance Eligible Projects When Banks Will Not Lend

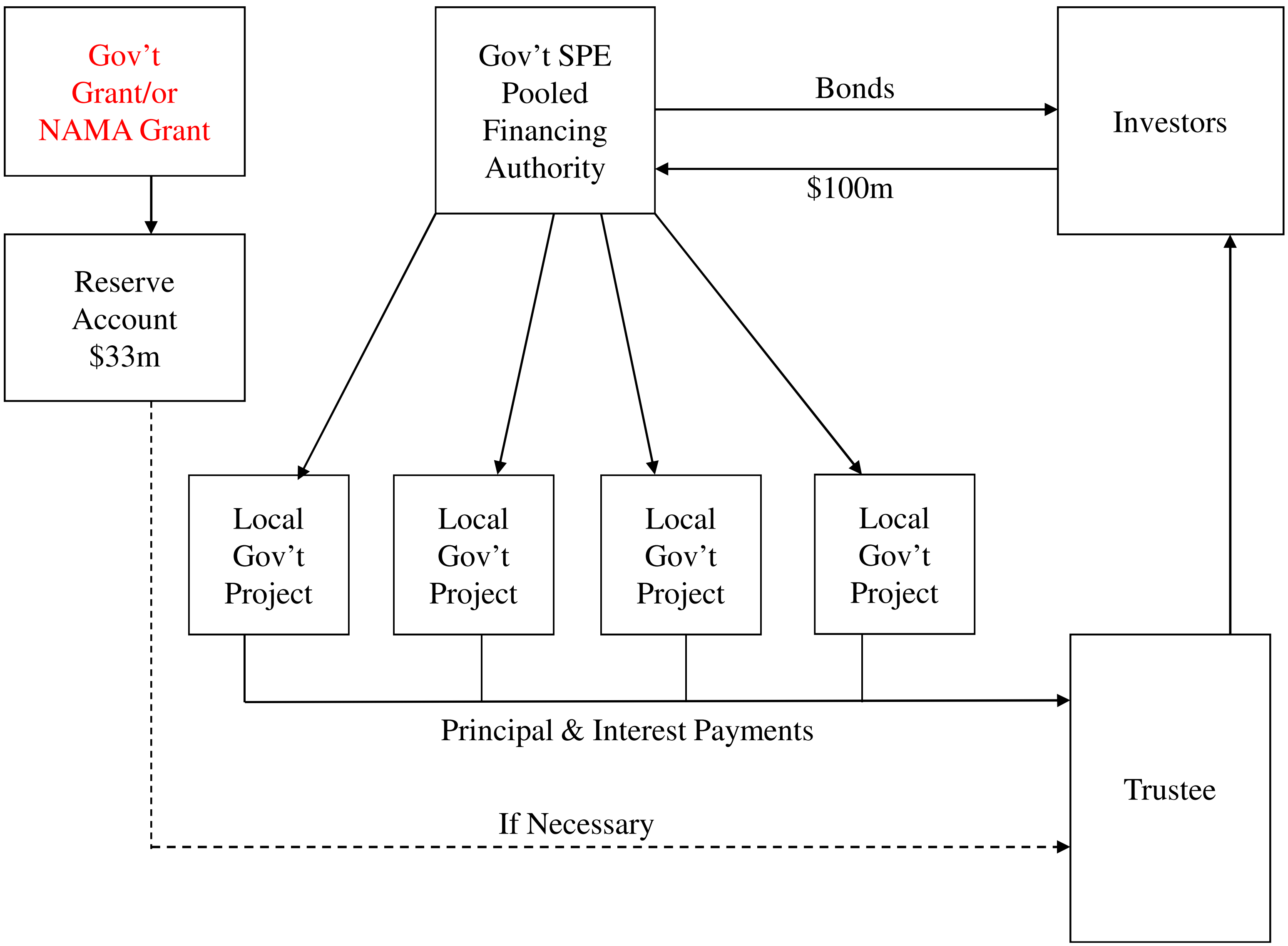
- Where commercial bank financing is not available. NAMA resources capitalize special funds with specific project eligibility criteria
- Competitive bidding for private sector management of the fund
- Repayments to the Fund from loans revolve and are used to finance future projects

Creation of Special Purpose Entities

- Can be used to bundle small-scale projects for financing from the private sector
- Can be public or private entities
- Can address management and capacity constraints in project risk assessment
- Management of SPE have special financial and project skills unique to target sector

Simplified Flow of Funds for SPE Pooled Financing

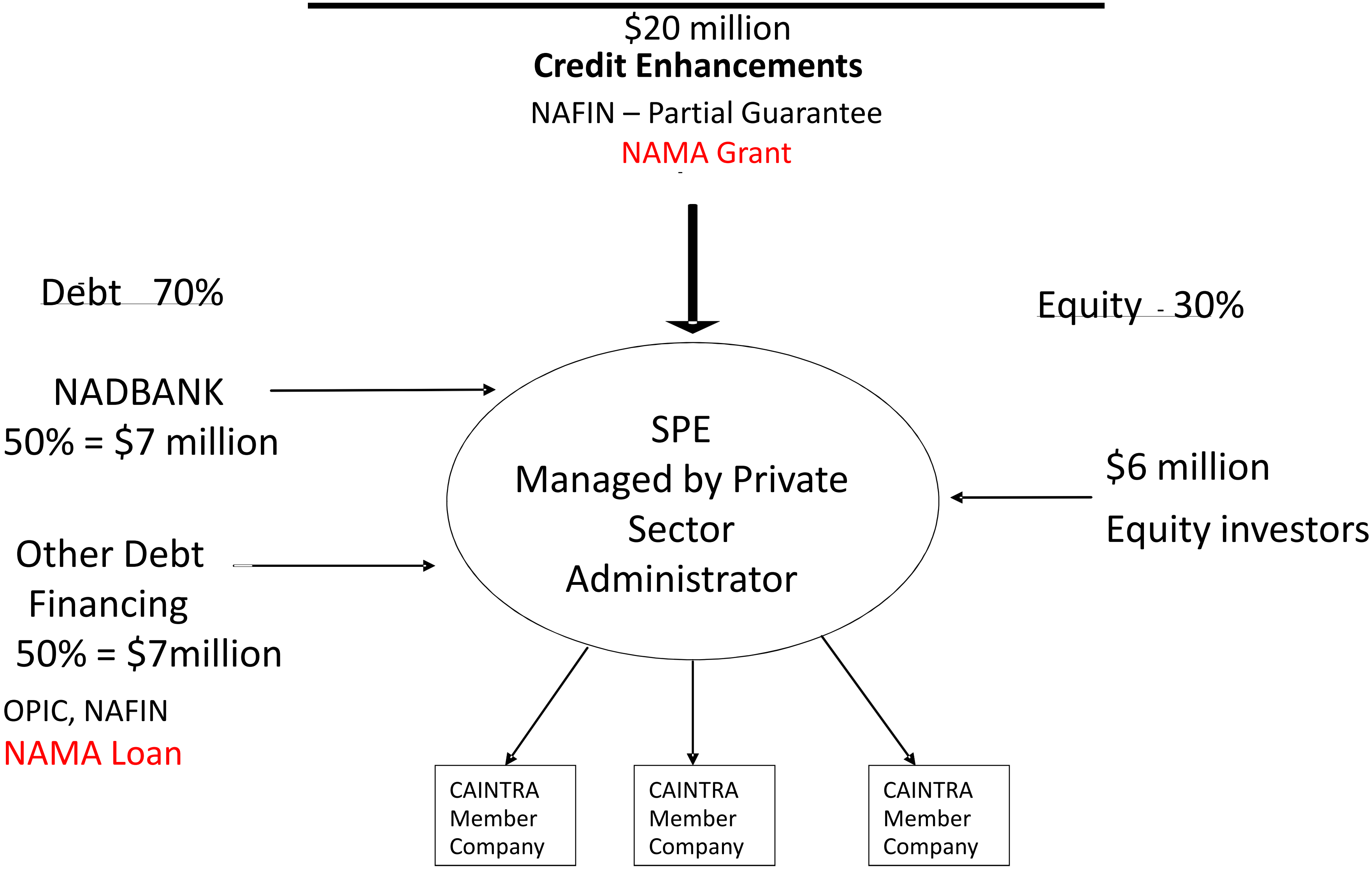
$100 Million



Profile of Pooled Financing of Local Environmental Projects in New York State

EFC Financing (US$ in Millions)			
Offering	Number of Borrowers	Bond Amount	Average Project Size
2010	29	$ 80.3	$5.6
2009	59	$248.3	$4.2
2008	29	$147.6	$5.6
2007	42	$326.7	$8.0
2006	15	$ 75.5	$5.0

CAINTRA – FINANCE STRUCTURE



Extension of Lending Maturities

- Provides longer-term financing for eligible projects than available from local banks
- Can substantially lower annual debt service payments for projects
- Has great leveraging capacity
- Relies on local lending institutions to make credit risk assessment

Comparative Debt Service Table on a $100 Million Loan

Term	Interest	Annual Payment
7 yrs	13%	$21.8 M
7 yrs	With Credit Enhancement 8%	$18.7 M
7 yrs	With Credit Enhancement 6%	$17.5 M
15 yrs	13%	$15.2 M
15 yrs	With Credit Enhancement 8%	$11.5 M
15 yrs	With Credit Enhancement 6%	$10.1 M

Development Bank Co-financial with Local Banks at Below Market Rates

- Provide zero or low- interest loans to projects as a co-financing partner with local banks
- Relies on local banks to make credit risk assessment
- Can substantially lower annual debt service payments of projects
- Repayment of loan principal is used to finance new loans/ revolving fund

Co-financing PWRF Structure

Stand-by credit line
For Bank loan
Refinancing rollover every 7years

JBIC/DBP Loan
50% loan
4.5%
20 year tenor

+

Local Private Bank Loans
50% loan volume
12.5% floating
7 year tenor

Blended interest rate 8.5%
Tenor 20 years

Creditworthy RE projects

Creditworthy RE projects

Creditworthy RE projects

3 Billion Peso Loan Program

Comparative Annual Amortization of Debt Calculations

	YEARS																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PFI 100%	428	428	428	428	428	428	428	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	428	428	428	428	428	428	428	0	0	0	0	0	0	0	0	0	0	0	0	0

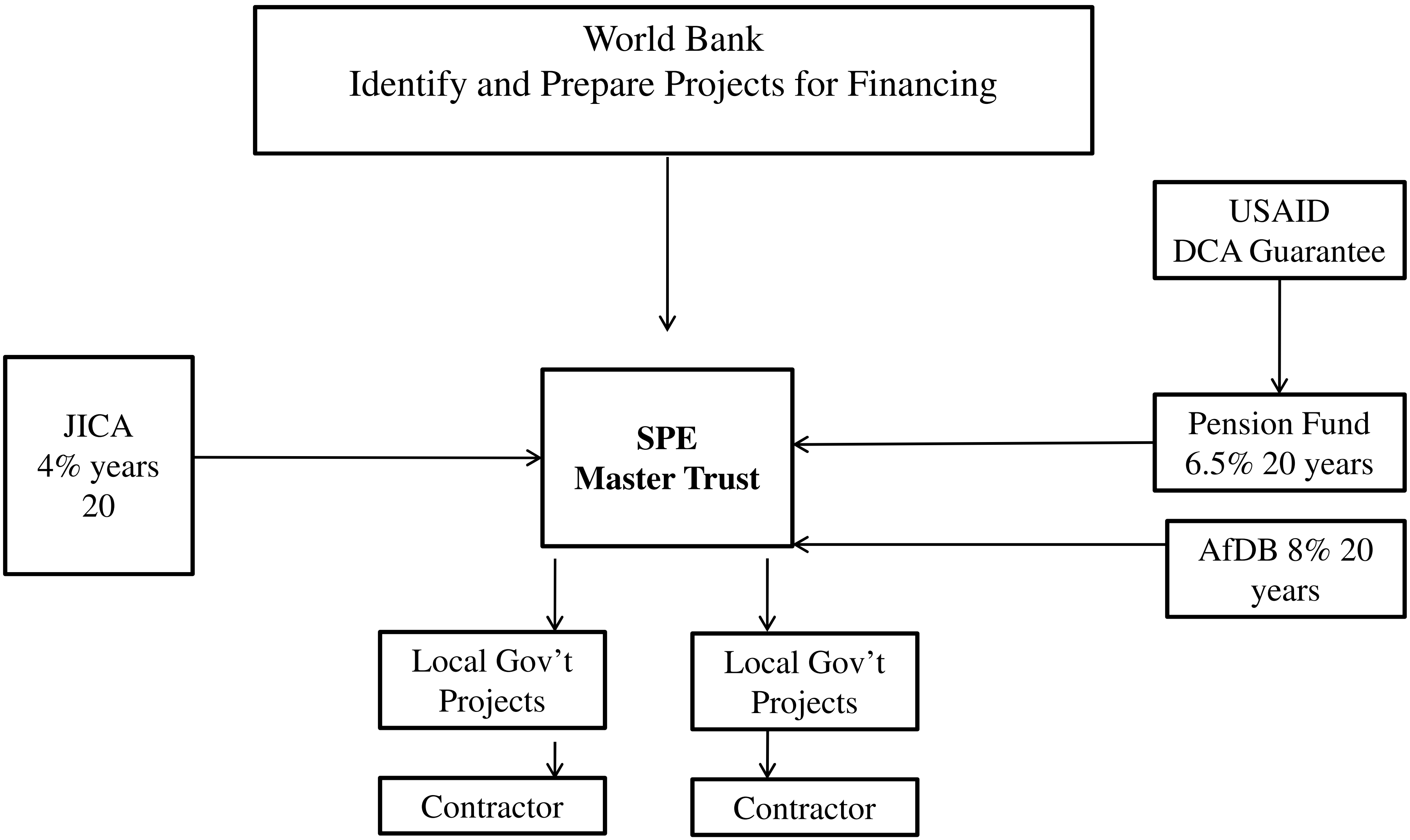
	YEARS																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PFI 50%	214	214	214	214	214	214	214	0	0	0	0	0	0	0	0	0	0	0	0	0
JBIC 50%	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
TOTAL	289	289	289	289	289	289	289	75	75	75	75	75	75	75	75	75	75	75	75	75

	YEARS																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PFI 50%	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
JBIC 50%	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
TOTAL	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150

Mobilization of Pension Funds

- Provides financing on longer terms and at lower interest rates than local banks
- Removes currency risk
- NAMA funds could be used for co-financing projects to address risk sharing requirement of pension funds
- Must be designed to address constraints in pension fund project risk assessment capabilities
- Pension funds are generally more conservative than local banks

Kenya Pension Fund Framework



Financial Mechanisms To Address Impediments

Risks/Barriers	Instrument
Perceived credit quality of borrowers or entering a new sector	Partial Credit Risk Guarantee – but not helpful in high interest rate environments
High transaction costs of smaller-scale projects	Creation of Special Purpose Entity (SPE) for project implementation
Lack of familiarity with technology	Performance Guarantee
High interest rate environments and/or lack of project revenues to cover market- terms of financing	Extension of lending maturities Soft loans Co-financing with local banks
Lack of capacity in local banks	Special Funds

How to Design NAMA Financial Mechanisms
Financial Market Assessment

- Work with financial specialist to assess local financial conditions
- Bank lending terms – interest rates, maturities, collateral
- National Development Bank lending – eligible sectors and terms
- Bond market – is it available
- Borrowing capacity of project sponsors
- Credit rating capacity and credit ratings

How to Design of NAMA Financial Mechanisms Identify Impediments and Design Solution

- Discuss financing issues with project developers, bankers and government officials – focus on specific projects and specific impediments
- Consider the best way to use NAMA funds to address financial impediments – low costs financing, guarantees, SPE or special funds
- Discuss NAMA financial mechanisms with potential lenders/investors – use term sheets of specific projects
- Requires continuous dialogue among lenders, borrowers/donors, and government representatives

How to Design NAMA Financial Mechanisms Implementation Issues

- Consider local conditions
- Consider donor requirements
- Designed to work effectively with NAMA policy actions
- Consider time and expenses of setting up NAMA financial mechanism
- Consider administrative costs and responsibilities
- Who will manage the mechanism/program?
- How will administrative costs be covered?
- What is the exit strategy for the program?

<u>NAMA Perspective Innovative</u>

- **<u>Careful Financial Analyses</u>**

- **<u>Identification of Real Barriers</u>**

- **<u>Design of Appropriate Tools</u>**

NAMA Financial Mechanism Design Criteria

- **Acceptable to private lenders** – A financial structure that does not require lenders to compromise on lending criteria or terms.

- **Acceptable to national and local governments** – Provides private sector financing at the lowest possible costs to local NAMA program beneficiaries.

- **Acceptable to borrowers** – Financial program will be utilized by project developers/borrowers

- **Unique to local conditions** -Designed to work effectively within policy and financial framework of the host country.

Conclusions

- NAMA financing mechanisms are currently undefined and therefore can be very flexible
- NAMA mechanisms must nevertheless be consistent with donor requirements and conditions
- Limited donor assistance requires that NAMAs leverage private sector financing and are sustainable
- Examples of GEF and other innovative financial programs can be very helpful but each NAMA has to reflect and respond to local financial and policy frameworks
- NAMA mechanisms must be designed through extensive consultations among donors, lenders, borrowers and local governments

California Residential Reservations Since Introduction of SolarCity's Lease Option