# OFFSHORE ALTERNATIVES 2010

## FINANCING OFFSHORE WIND FARMS

PROJECT FINANCING, MARAD TITLE XI & CCF PROGRAMS, AND NON-CITIZEN LEASE FINANCING UNDER 46 U.S.C. 12119


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# FINANANCING OFFSHORE WIND FARMS

PROJECTS & PROJECT FINANCING

PROJECT STRUCTURES & FINANCING ALTERNATIVES

VESSELS, VESSEL COSTS & FINANCING ALTERNATIVES

MARAD TITLE XI & CCF PROGRAMS & “NSRP” STUDIES

LEASE FINANCING & NON-CITIZEN LEASE FINANCING WITH 46 U.S.C. 12119

MARINE LOG

# FINANANCING OFFSHORE WIND FARMS

## PROJECTS & PROJECT FINANCING

# FINANANCING OFFSHORE WIND FARMS

PROJECTS & PROJECT FINANCING

Planning, procurement and construction

Commencement of operations and proof of capacity

Operations over term

Disassembly at end of term

MARINE LOG

# FINANANCING OFFSHORE WIND FARMS

## PROJECT STRUCTURES & FINANCING ALTERNATIVES

# FINANANCING OFFSHORE WIND FARMS

## PROJECT STRUCTURES & FINANCING ALTERNATIVES

COMBINNG POWER GENERATION AND VESSEL EQUIPMENT NEEDS- USING A MARITIME AFFILIATE SERVICE PROVIDER – MARINE LOG – AKER/BLUEWATER WIND – Combined single party responsibilty for planning, procurement, financing and operations -- on basis of completion insurance, take or pay contracts and MARAD or DOE loan guarantees and other credit support.

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PROJECT STRUCTURES & FINANCING ALTERNATIVES

SEPARATING POWER GENERATION AND VESSEL EQUIPMENT NEEDS -- USING ONE OR MORE THIRD PARTY VESSEL OWNER SERVICE PROVIDERS – Possible optimization of maritime asset financing terms and operator experience, and use only when needed, with maritime financing costs shared by a series of different wind power generation projects.

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VESSELS, VESSEL COSTS & FINANCING ALTERNATIVES

# FINANANCING OFFSHORE WIND FARMS

## VESSELS, VESSEL COSTS & FINANCING ALTERNATIVES

Projects will require “Jones Act” tonnage for the vessels for: (i) turbine installation (“TIVs”); (ii) transportation of other construction materials to the turbine installation sites (“TCVs”); and (iii) for on-going maintenance of the turbines over the Project term (“TMVs”), with different shipyard prices and different financing alternatives.

# FINANANCING OFFSHORE WIND FARMS

## VESSELS, VESSEL COSTS & FINANCING ALTERNATIVES

TIVs -- vessels for turbine installation and for possible standby for major repairs -- $200 million to $350 million

TCVs -- vessels to ferry construction materials and assist the TIV's installation activities  -- $3 million to $5 million

TMVs -- vessels to maintain the turbines under "ordinary" conditions - $3 million to $5 million

# FINANANCING OFFSHORE WIND FARMS

## VESSEL COSTS & VESSEL FINANCING ALTERNATIVES

With shipyard delivered prices which may range from lees than $5 million to more that $300 million, and the possibility of different owners and operators, there will be a variety of equity and debt financing alternatives.

# FINANANCING OFFSHORE WIND FARMS

## VESSEL COSTS & VESSEL FINANCING ALTERNATIVES

Vessel equity might be provided by the Project company for the TCVs and TMVs and perhaps for the more expensive TIVs. But the equity for the TIVs might also be sourced in leasing transactions involving non-citizen European entities with prior offshore wind farm involvements, or from U.S. hedge funds for which proof of U.S. citizenship would be daunting.

# FINANANCING OFFSHORE WIND FARMS

## VESSEL COSTS & VESSEL FINANCING ALTERNATIVES

Caterpillar or other engine manufacturer financing might be best source for the vessel debt for the less expensive TCV and TMV vessels. Debt guaranteed under the MARAD Title XI Loan Guarantee Program should be optimal for the more expensive TIV vessels. But, if Title XI Program loan guarantee authority for the vesels in the $200 to $300 million plus range may not be available, DOE loan guarantees may be a substitute.

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VESSEL COSTS & VESSEL FINANCING ALTERNATIVES

The MARAD CCF Tax Deferral Program should be available and can be usefully employed for all of the classes of vessels involved.

MARINE LOG

# FINANANCING OFFSHORE WIND FARMS

MARAD PROGRAMS & 2007/2008 NATIONAL SHIPBUILDING RESARCH PROGRAM “NSRP” WORKSHOP STUDIES

# FINANANCING OFFSHORE WIND FARMS

## MARAD PROGRAMS & 2007/2008 NSRP WORKSHOP STUDIES

In 2007 and 2008 the Department of Defense sponsored two, by invitation only, National Shipbuilding Research Program ("NSRP") workshops to investigate ways in which U.S. shipyards might reduce their production costs for vessels to be sold to U.S. Jones Act operators that would be useful and available to the DOD in time of war or national emergency.

# FINANANCING OFFSHORE WIND FARMS

## MARAD PROGRAMS & 2007/2008 NSRP WORKSHOP STUDIES

In the 2007 the workshop sessions, attention was directed to methods by which shipyard production costs could be reduced, as a means of achieving corresponding reductions in shipyard sale prices for Jones Act operator purchasers.

# FINANANCING OFFSHORE WIND FARMS

## MARAD PROGRAMS & 2007/2008 NSRP WORKSHOP STUDIES

At the conclusion of the 2007 workshop, several participants noted that it would be an operator’s “fully financed vessel cost”, and the terms of the financing, rather the shipyard sales price, that an operator would be required to evaluate in testing its business plan, and that these financing subject matters had not been addressed in the 2007 workshop sessions.

# FINANANCING OFFSHORE WIND FARMS

## MARAD PROGRAMS & 2007/2008 NSRP WORKSHOP STUDIES

It was agreed that the identification of financing methods that would minimize financing costs would require an analysis and comparison of available financing alternatives.

A workshop participant familiar with the MARAD Programs and the other available financing alternatives agreed to conduct such an analysis and comparison and to report the results of this study at the 2008 NSRP workshop sessions.

# FINANANCING OFFSHORE WIND FARMS

## MARAD PROGRAMS & 2007/2008 NSRP WORKSHOP STUDIES

Examples of fully financed costs were then developed for an owner purchase of a $100 million vessel from a Jones Act shipyard under differing financing structures that included the use of the MARAD Title XI and CCF Programs and of representative commercial financing alternatives.

# FINANANCING OFFSHORE WIND FARMS

## MARAD PROGRAMS & 2007/2008 NSRP WORKSHOP STUDIES

A summary of the results of this study of the fully financed costs of Jones Act vessels using MARAD Title XI and CCF Program financing and representative commercial financing alternatives was presented at the 2008 NSRP workshop sessions.

# FINANANCING OFFSHORE WIND FARMS

## MARAD PROGRAMS & 2007/2008 NSRP WORKSHOP STUDIES

The study summary indicated that when the MARAD Title XI and CCF Programs were employed together, vessel financing costs could be achieved that were significantly lower that those that could be achieved with any of the currently available commercial alternatives.

# FINANANCING OFFSHORE WIND FARMS

## MARAD PROGRAMS & 2007/2008 NSRP WORKSHOP STUDIES – FULLY FINANCED CASH COST

The study concluded that where the Title XI and CCF Programs were used in combination, rather than any of the commercial financing alternatives, the otherwise commercially financed full cash cost of a vessel could be lowered by as much as 18 percent on the basis of a CCF portfolio investment return of only of 7 percent.

# FINANANCING OFFSHORE WIND ARMS

## MARAD PROGRAMS & 2007/2008 NSRP WORKSHOP STUDIES – FULLY FINANCED NET PRESENT VALUE COST

The study concluded that where the Title XI and CCF Programs were used in combination, rather than any of the commercial financing alternatives, the otherwise commercially financed net present value cost of a vessel could be lowered by as much as 15 percent on the basis of a CCF portfolio investment return of only 7 percent.

# FINANANCING OFFSHORE WIND FARMS

## MARAD TITLE XI PROGRAM

The MARAD Title XI Program allows an owner to issue bonds to finance up to 87.5 percent of a vessel’s cost with a U.S. Treasury guarantee of the payment of principal and interest, in exchange for the owner’s payment of modest guarantee fees.

The Program provides a Treasury-related debt coupon rate (as compared with higher commercial market rates), and terms of up to 25 years (as compared with commercial terms of no more than 12 to 15 years).

# FINANANCING OFFSHORE WIND FARMS

## MARAD CCF PROGRAM

The MARAD CCF Program allows a taxpayer to shelter vessel operating and sales income, and portfolio investment income, for a period of up to 25 years in exchange for the taxpayer's commitment to purchase or construct a U.S. flag vessel or vessels.

It may be useful to think of this Program as providing the taxpayer with the use of both: (i) a "CCF depreciation" election (that allows a vessel to be depreciated prior to its being placed in service); and (ii) a 401(k) investment account (that allows the compounding of a taxpayer's investment income over the terms of vessel financing transactions).

# FINANANCING OFFSHORE WIND FARMS

JONES ACT LEASE FINANCING, NON-CITIZEN & HEDGE FUND LEASE FINANCING

# FINANANCING OFFSHORE WIND FARMS

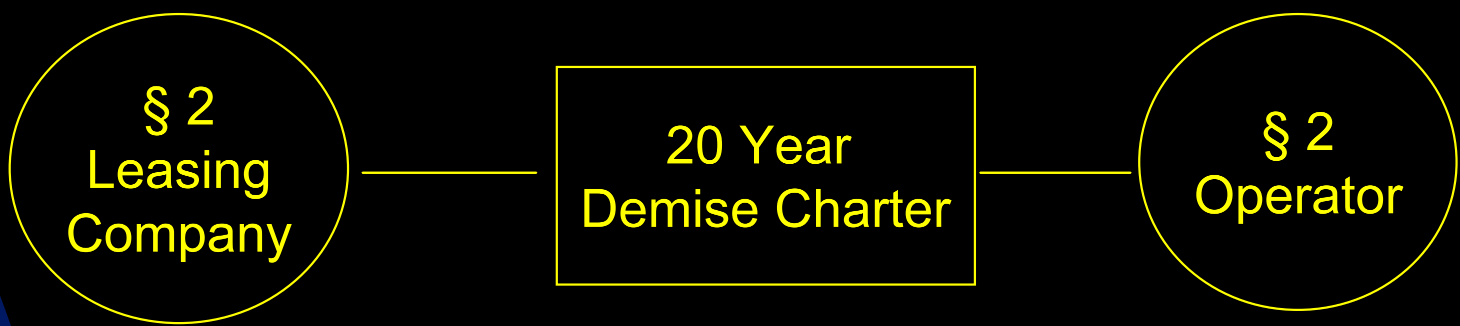
## JONES ACT LEASE FINANCING

Lease financing was chosen for many U.S. flag vessel projects during the U.S. shipbuilding of the 1970s and 1980s.  Leasing company affiliates of institutions like Bank of America, Citibank Leasing, GATX and GE Credit & Leasing provided an active market in U.S. citizen leasing equity.

# FINANANCING OFFSHORE WIND FARMS

## JONES ACT LEASE FINANCING

LEASE FINANCING DIAGRAM 1: Leasing with Section 2 Citizen Owner Lessors and Operators.




For Example:
§ 2 Owner Lessor– Citibank Leasing or GE Credit & Leasing
§ 2 Operator – Marine Transport Lines

# FINANANCING OFFSHORE WIND FARMS

## LEASE FINANCING WITH MARAD PROGRAMS

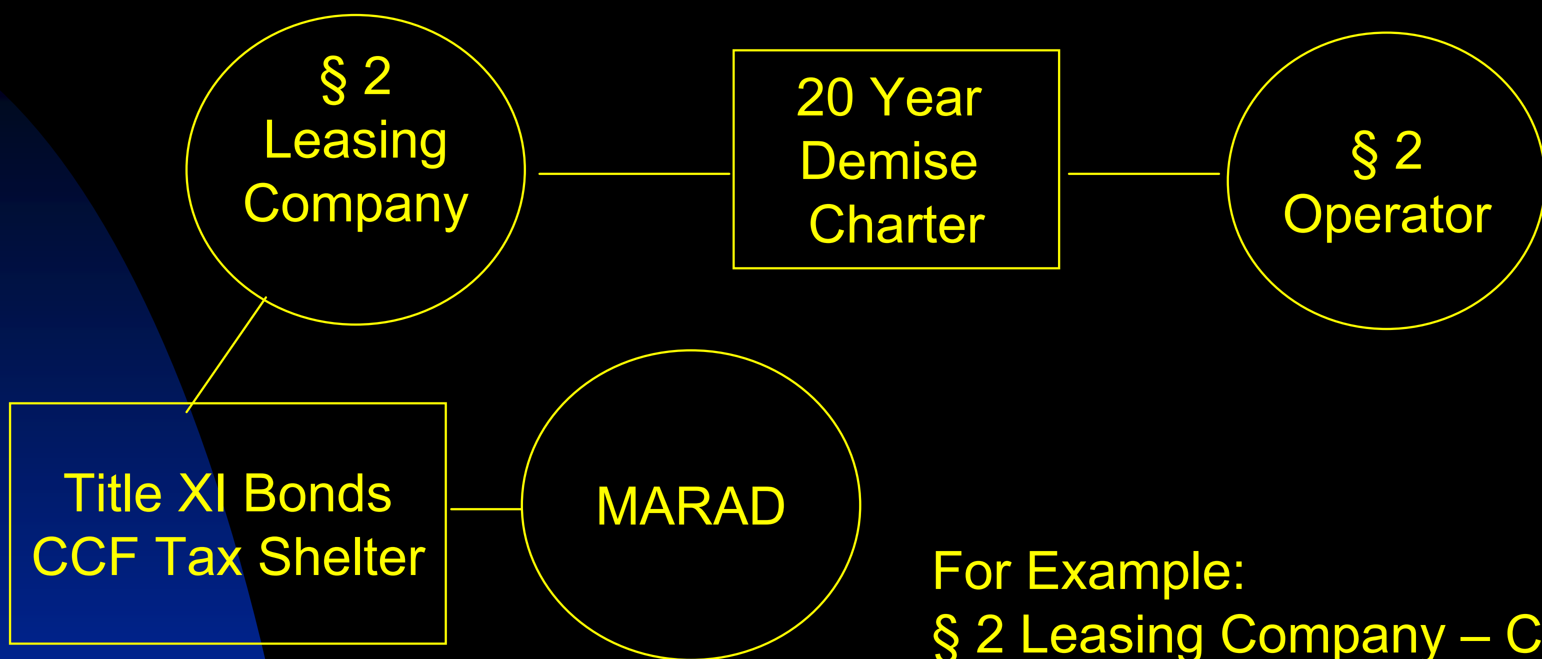
Where the MARAD Programs were employed, the Owner Lessor was able to: (i) use the Title XI Program to leverage its equity investment with low-cost long-term debt; and (ii) use the CCF Program to shelter its high-yield investment income.

MARAD Program use enhanced the Owner Lessor’s return, providing benefits that might be shared with the Operator through reductions in vessel lease hire charges.

# FINANANCING OFFSHORE WIND FARMS

## LEASE FINANCING WITH MARAD PROGRAMS

LEASE FINANCING DIAGRAM 2: Section 2 Leasing with MARAD Programs.




For Example:
§ 2 Leasing Company – Citibank Leasing or GE Credit & Leasing
§ 2 Operator – Marine Transport Lines

# FINANANCING OFFSHORE WIND FARMS

## LEASE FINANCING WITH NON-CITIZEN OWNERS

The qualifications for Jones Act vessel owners were changed in 1996 and again in 2004. Now non-citizen financial institutions may function just as Citibank Leasing and GE Credit & Leasing served as vessel owners in Lease Financing Diagrams 1 and 2.

Ownership of Jones Act qualified vessels by non-citizen leasing companies is now allowed under section 12119 if the vessel is demise chartered to a section 50501 U.S. citizen Operator for a period of three years or more.

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The codification of Title 46 U.S.C. was completed in 2006, and section 2 is now section 50501 and section 12106(e) is now section 12119.

# FINANANCING OFFSHORE WIND FARMS

## LEASE FINANCING WITH NON-CITIZEN OWNERS

LEASE FINANCING DIAGRAM 3: Section 12119 Leasing with Non-Citizen Owner Lessor and Section 50501 Operator.

# FINANANCING OFFSHORE WIND FARMS

## LEASE FINANCING WITH NON-CITIZEN OWNERS

The potential importance section 12119 leasing is illustrated by the $1.2 billion Aker Philadelphia Shipyard Jones Act transaction with the Overseas Shipholding Group.

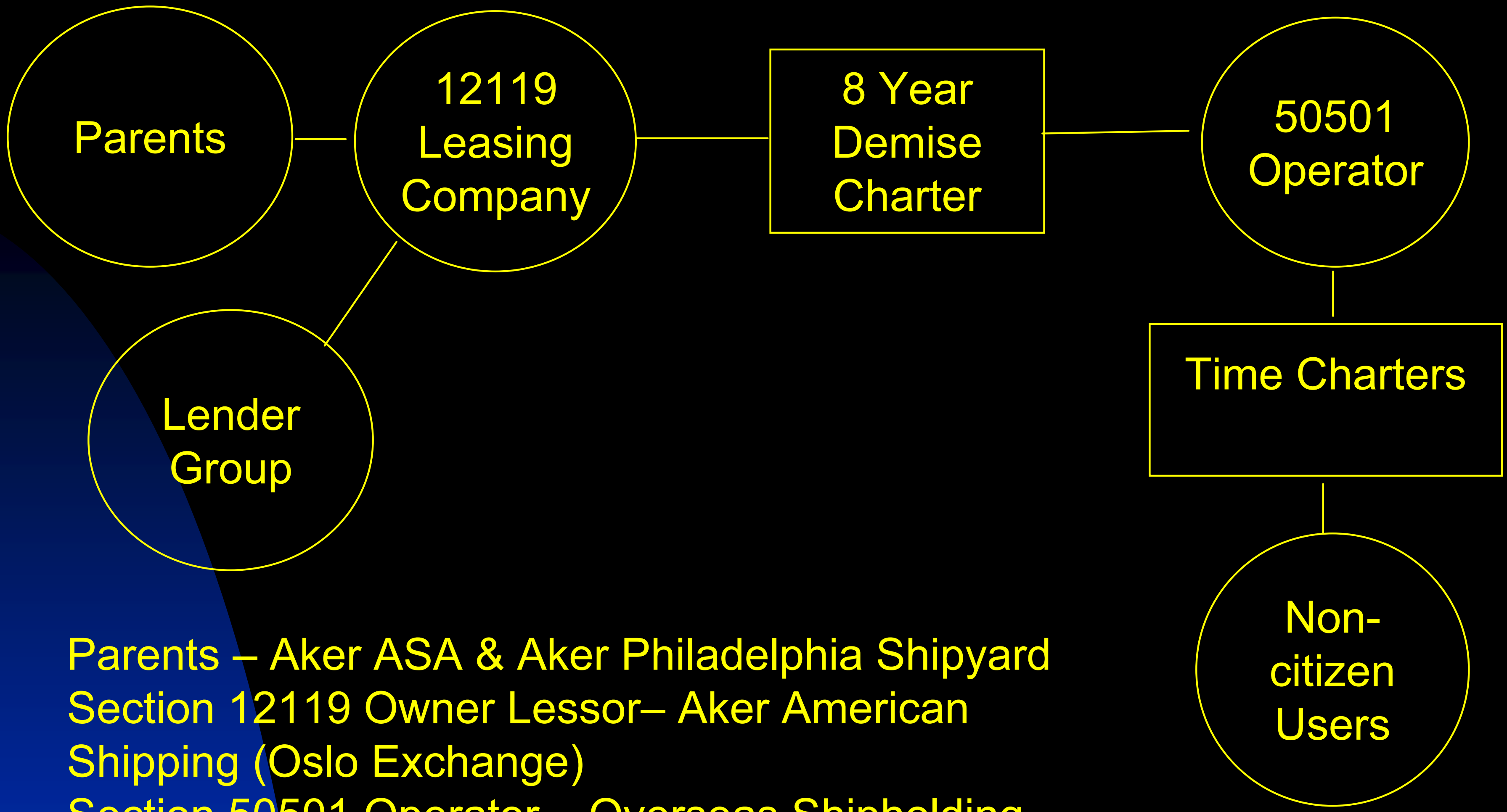
The vessels were built by a Norwegian managed shipyard and sold to a Norwegian controlled section 12119 leasing company, that demise chartered the vessels to OSG as the U.S. section 50501 citizen operator, for a term of 8 years. The initial OSG time charters were to United Kingdom and United Kingdom/Netherlands international oil companies.

# FINANANCING OFFSHORE WIND FARMS

## LEASE FINANCING WITH NON-CITIZEN OWNERS

OSG was the only U.S. section 50501 citizen in the transaction which was financed with non-citizen equity and a non-citizen led lender group.

LEASE FINANCING DIAGRAM 4: Section 12119 Leasing with Non-Citizen Owner Lessor, Lender and Time Charterers.



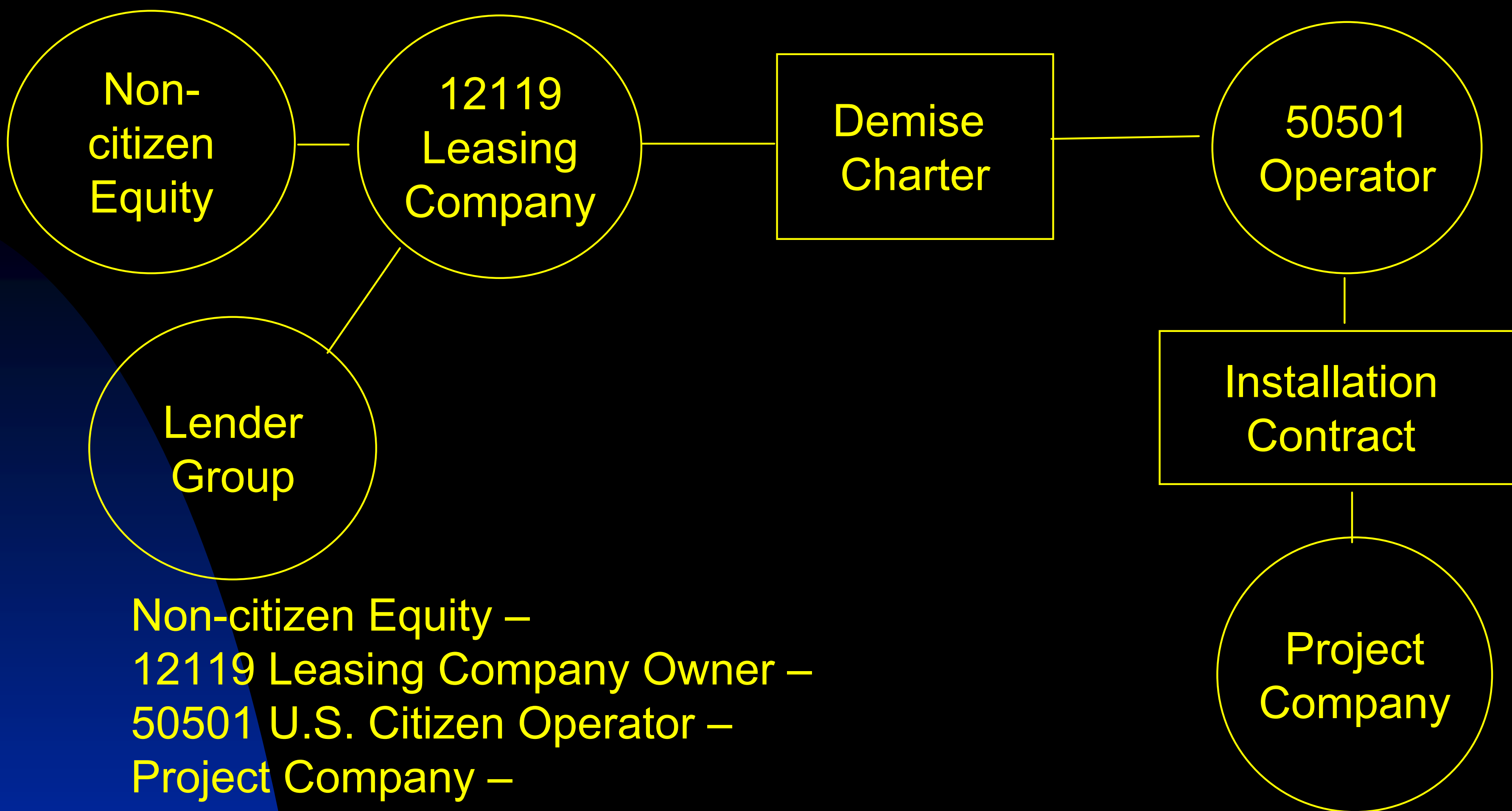

Parents – Aker ASA & Aker Philadelphia Shipyard
Section 12119 Owner Lessor– Aker American Shipping (Oslo Exchange)
Section 50501 Operator – Overseas Shipholding Group
Lender Group –DnB NOR Bank

# FINANANCING OFFSHORE WIND FARMS

## LEASE FINANCING WITH NON-CITIZEN OWNERS

This Lease Financing Diagram 4 schematic might easily be adapted for a section 12119 non-citizen or hedge fund lease financing for a $300 million Turbine Installation Vessel as displayed in this next Lease Financing Diagram 5

LEASE FINANCING DIAGRAM 5: Section 12109 leasing of Turbine Installation Vessel with Non-Citizen Owner Lessor, 50501 Operator and Turbine Installation Contract.




Non-citizen Equity –
12119 Leasing Company Owner –
50501 U.S. Citizen Operator –
Project Company –
Lender Group –

# FINANANCING OFFSHORE WIND FARMS

## LEASE FINANCING WITH NON-CITIZEN OWNERS AND MARAD PROGRAMS

The Owner Lessor in section 12119 leasing transactions could expect to employ the MARAD Programs in a fashion similar to that for the Jones Act leasing transaction shown in Lease Financing Diagram 2 -- to provide enhanced transaction benefits that might be entirely retained by the Owner, or shared with the Operator through reductions in vessel lease hire charges.

# CONCLUSIONS

WHAT HAVE WE LEARNED ABOUT FINANANCING OFFSHORE WIND FARMS --

PROJECTS & PROJECT FINANCING

PROJECT STRUCTURES & FINANCING ALTERNATIVES

VESSELS, VESSEL COSTS & FINANCING ALTERNATIVES

MARAD TITLE XI & CCF PROGRAMS & “NSRP” STUDY FINDINGS

LEASE FINANCING AND NON-CITIZEN & HEDGE FUND LEASE FINANCING WITH 46 U.S.C. 12119

# THAN YOU