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# Tomorrow's Energy . . . Today

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**Sigma Capital Group, Inc.**  
**Bruce Woodry, Chairman and CEO**

October, 2006

# Sigma Capital Group, Inc.

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## Who we are:

- Sigma Capital is a boutique investment bank, providing advisory and representative investment banking services on \$5-250M transactions
- Primarily to energy and renewable energy project finance.

## My focus:

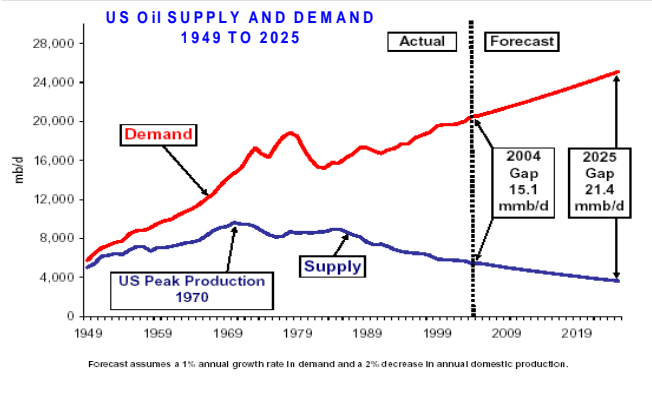
- Project finance (private equity and debt) for ethanol and integrated agri-energy projects

## Today, Primer on Renewable Energy Project finance:

- Comparison to Growth Funding
- Some things to consider when reviewing a renewable energy project finance transaction

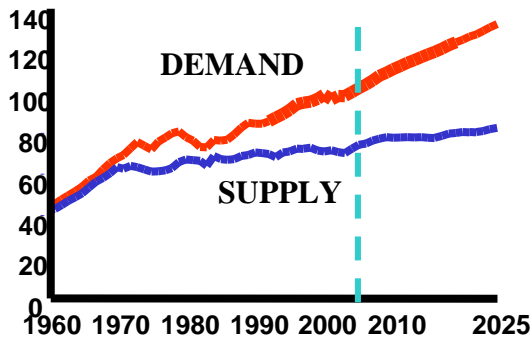
# Energy: Changing industry

## US OIL

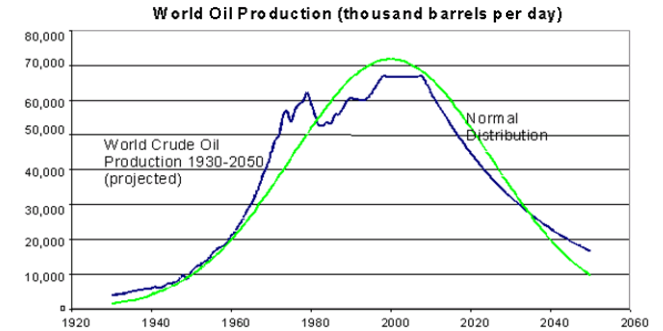


Sources: EIA and RJ Research estimates and analysis

## US NATURAL GAS

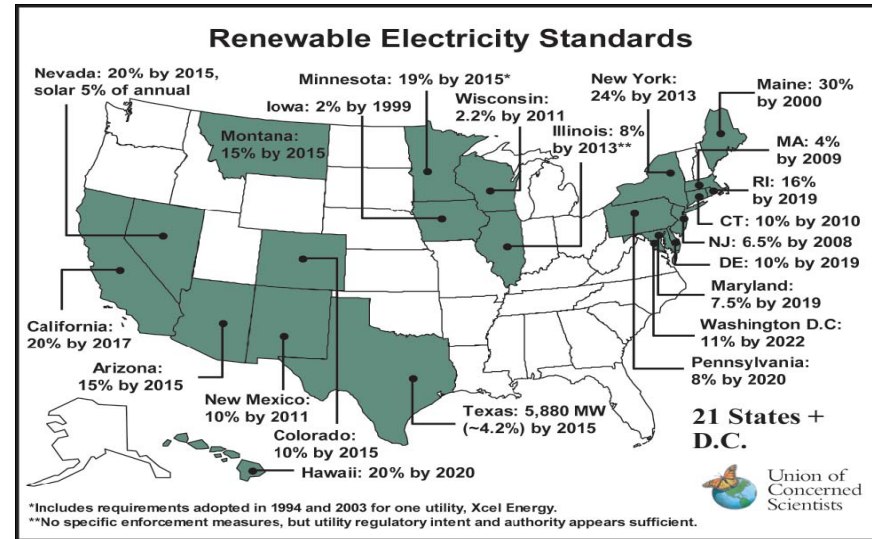
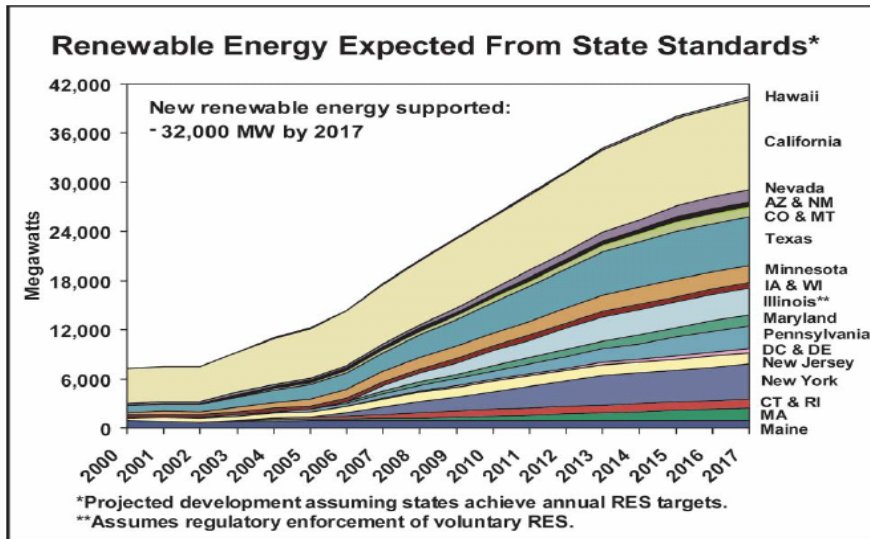


## WORLD OIL



- World oil peaked circa 2000, no major discoveries, existing wells on decline curve
- U.S. Oil
  - Production peak in 1970
  - Today, United States consumes 20 MBBL/day, 76 % imported (2004) going to 25 MBBL/day, (86%) imported (2025)
  - China, #2 at 9MBBL/Day is growing at 9%, competing for scarce supplies
- US Natural Gas
  - Price from \$1.5 to \$14 MCF over past several years
  - Summer/winter shortage
- Concerns over price, supply

# State and Federal Drivers

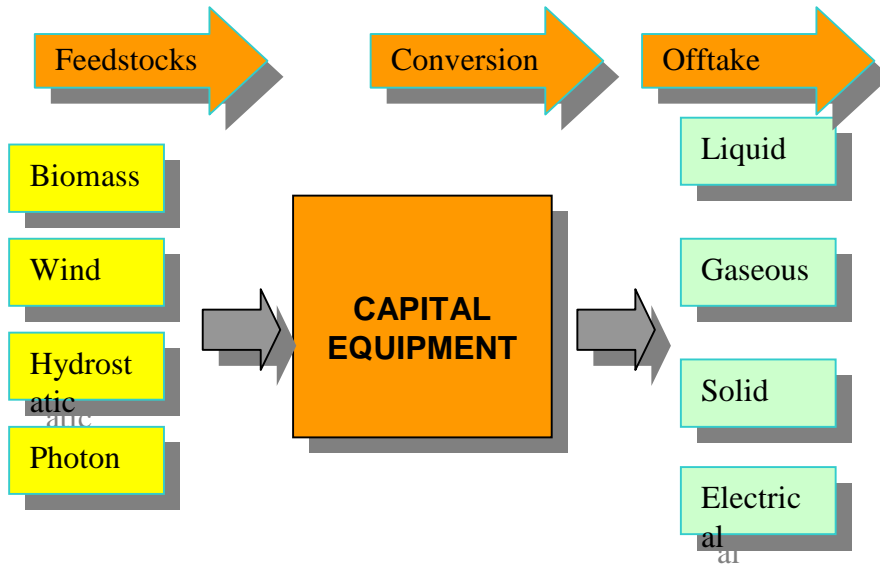


- Energy policy act of 2005
  - **PTCs By Technology:** 1.9 cents/kwh for 10-year period beginning on date facility is placed in service for Wind, Closed-loop biomass, Geothermal, Solar
  - Generally must be put in service between 2007 and 2008

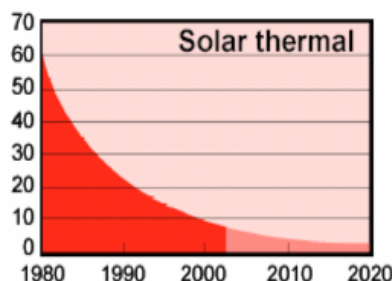
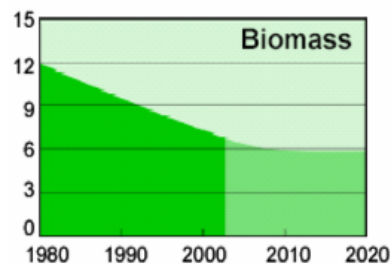
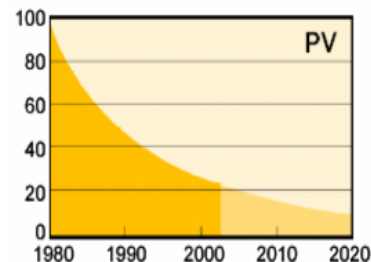
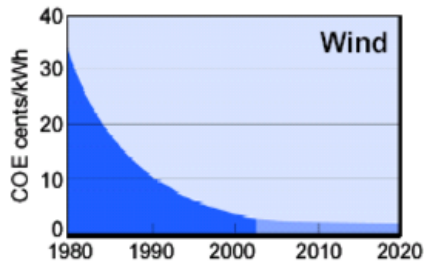
- State policies augment federal policies
  - Renewable portfolio standards in 21 states & District of Columbia
  - Requires 2%-24% of electricity to be generated by renewables

Expected to be 32,000 MW by 2017, California, New York, Texas will lead

# Renewable Energy Industry



- Renewable energy takes one form of energy (biomass, wind, hydro, sunlight) and converts to another, more usable form (liquid, solid, gaseous, electrical)
- Capex intensive
- Dynamic of the conversion: must relate local supply to local need

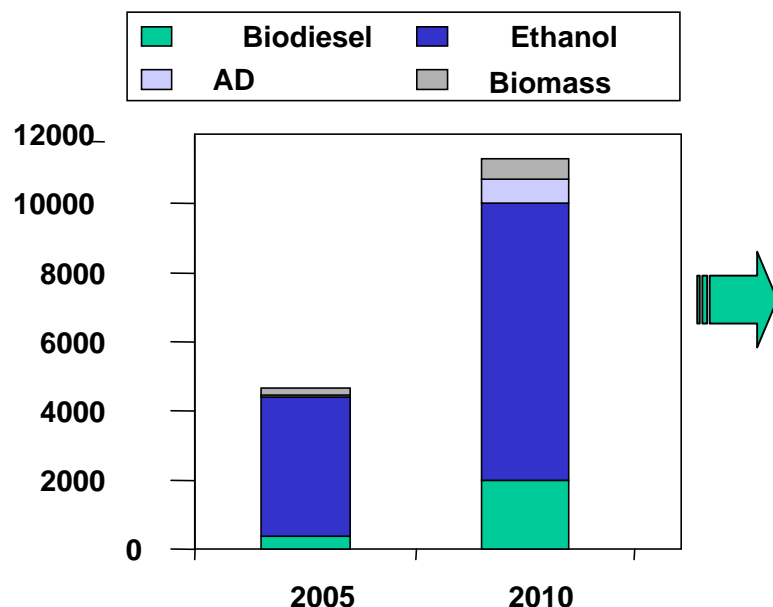


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# QUICK FINANCE TUTORIAL

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# Investment Prospects: Biofuels



## Biodiesel Market Potential:

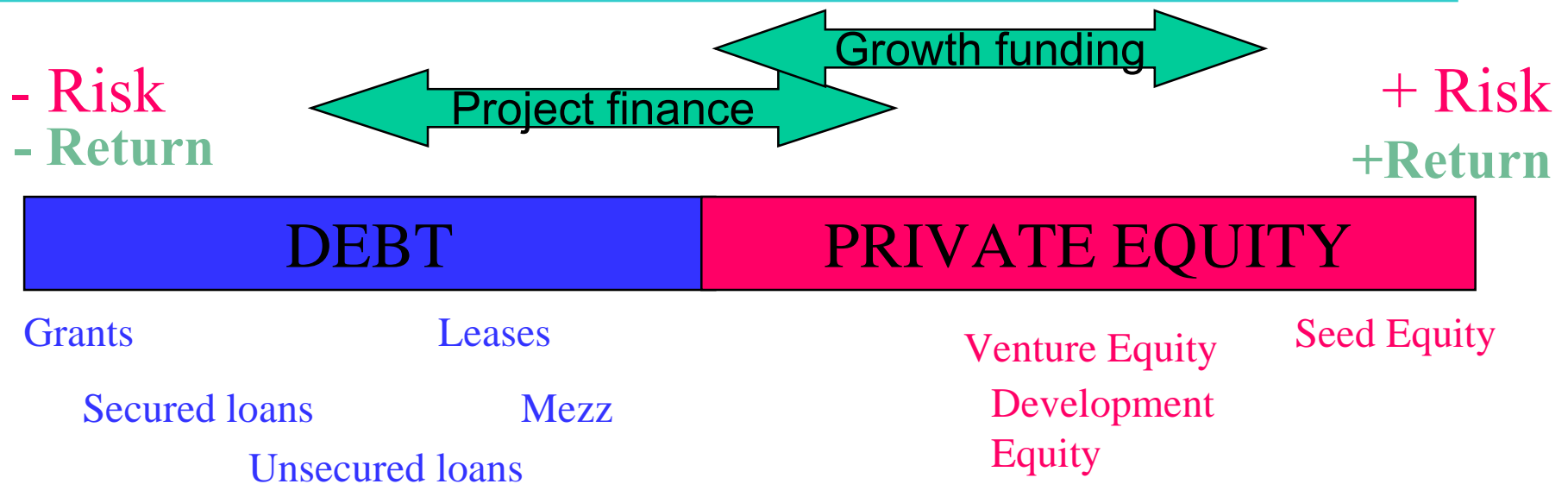
- About 700 MGPY new build out
- \$830M-\$1.4B Capex at \$1.20/gal -\$2.00/gal each

## Ethanol Potential:

- About 3 BGPY build out
- \$3.6B- \$4.8 B CapEx at \$1.20-1.60/gallon CapEx

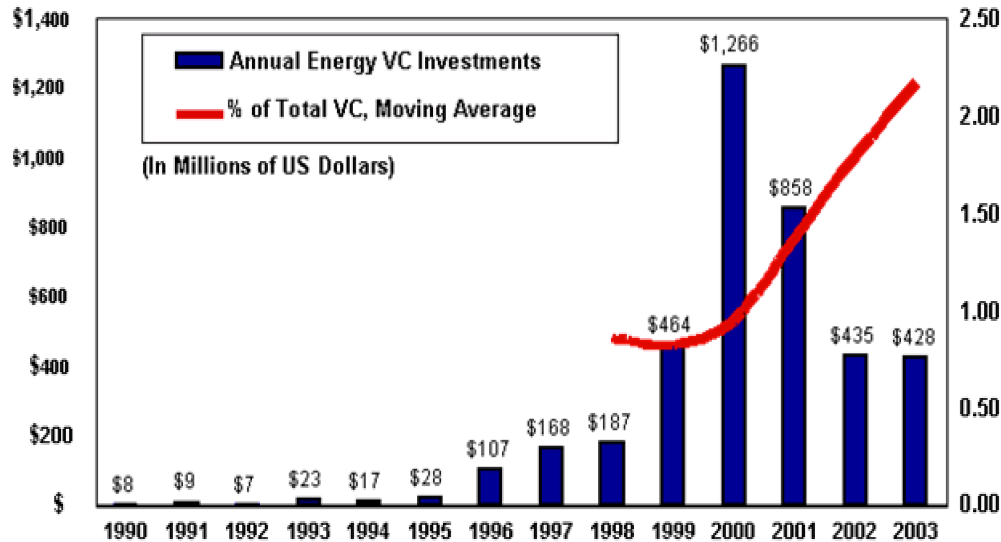
- Analogous to the Dot.Com days...“frothy” market,,Everyone rushing to “get in”
- Educated investors/lenders are cautious, access to lenders & investors is limited, projects are slowing down due to Investor & lender workload
- Potential exists for plant failures in the near term... However good long-term prospects
- A variety of new & inexperienced developers create substantial uncertainty in projects & marketplace
- Questions regarding feedstock, quality, transportation & market development (demand) heightening concerns

# Funding spectrum



- Money is not money
- Cost and structure of money is dependant on risk profile
- Growth funding (venture capital) typically all equity and includes technology and market risk return premiums
- Project finance mitigates technology and risk premiums, Debt/Equity, looks to the cash flow and balance sheet of the Offtake agreements
- Lower overall project IRR compensated by leverage

# Growth Company finance



POWERSHARES WILDERHILL CLEAN E  
as of 5-Apr-2006

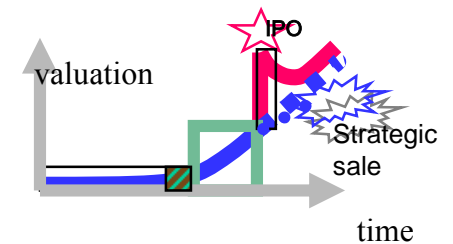
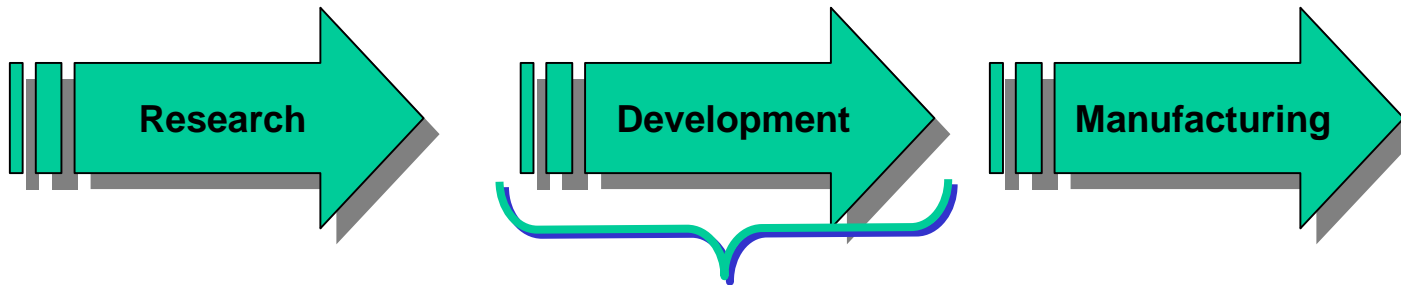


- Immature sector
- Growth funding is limited, but gaining momentum
- Many/most energy technology companies have not delivered investment grade returns
- Few IPOs, with some underperformers (Clipper & Capstone)
- BUT: great long term market potential if the right companies and fundamentals are selected

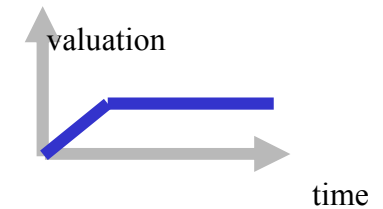
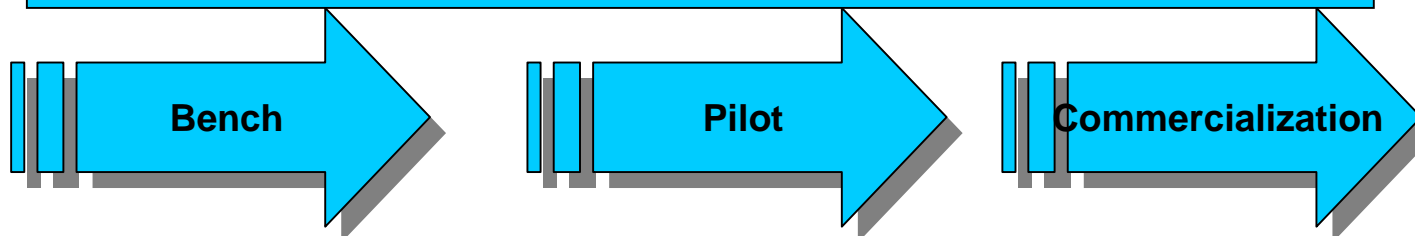
# Renewable Technologies: Dual Challenge

## Two Commercialization Pathways Required

### Products: Growth Company Pathway



### Fuels: Project Development Pathway



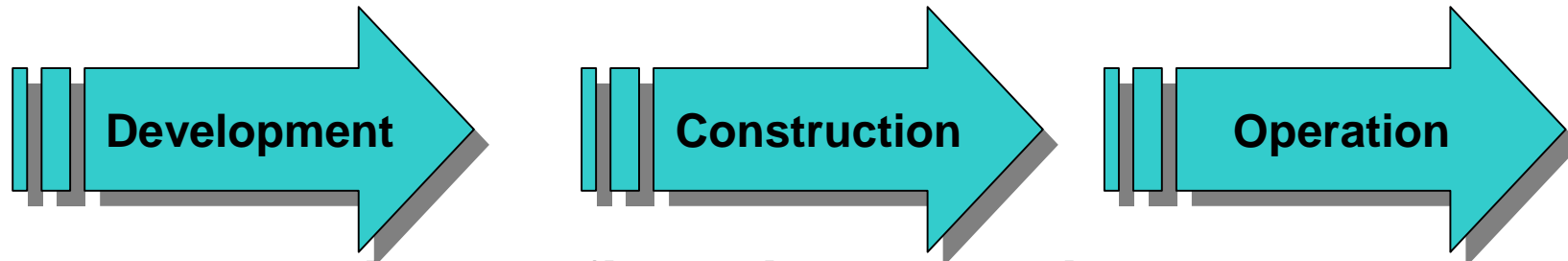
- Must link development of new renewable energy technology companies with fuels development
- Commercialization of both required in parallel
- Different management, business models and financing

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# PROJECT FINANCE

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# Phases of Renewable Energy project



## Matching the financing type with phase

Development Finance	Construction finance	Operational finance
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**Getting ready for fundraising and project**

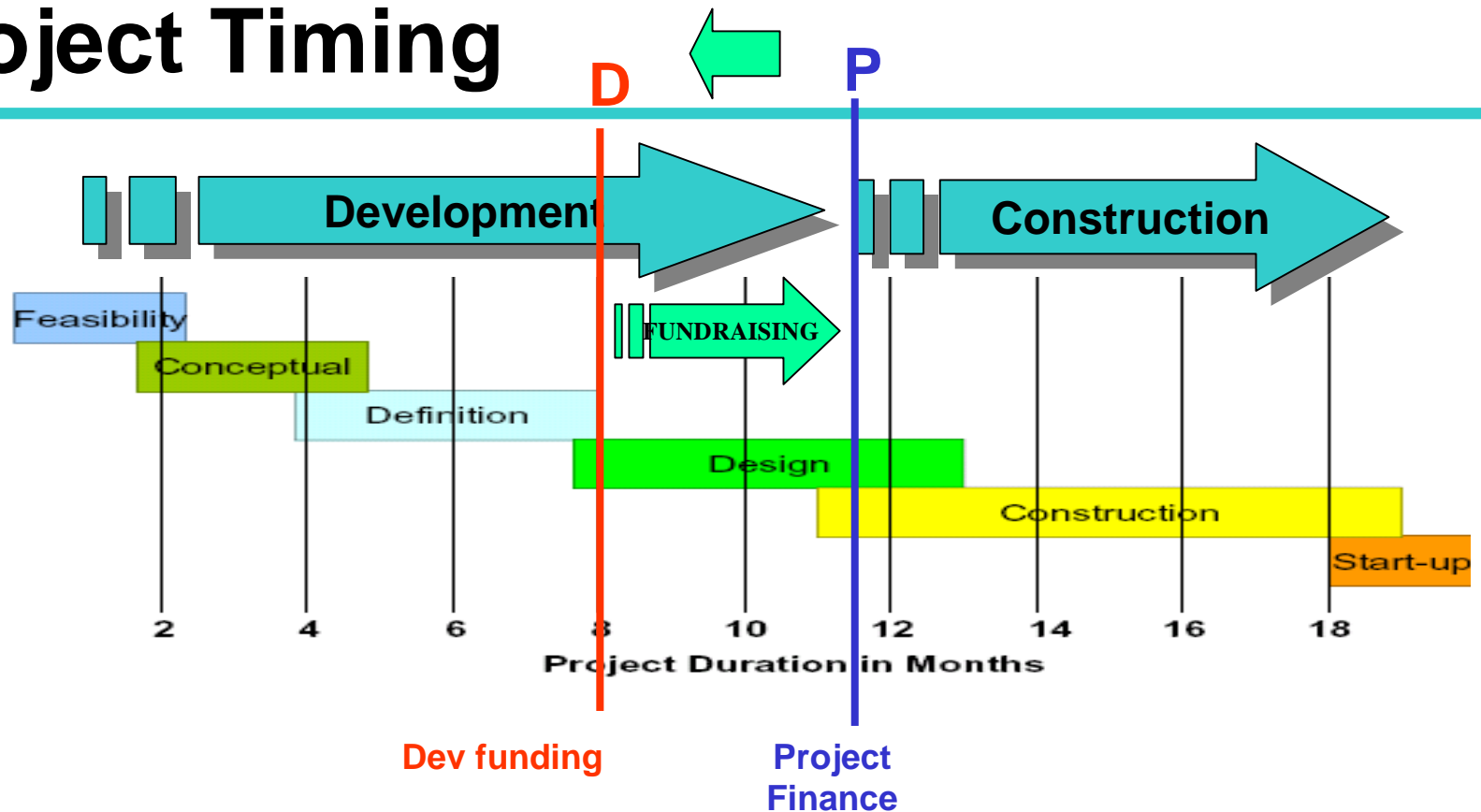
**Validate the project, obtain sites, permits**

**Preliminary design engineering**

**Managing engineering and construction**

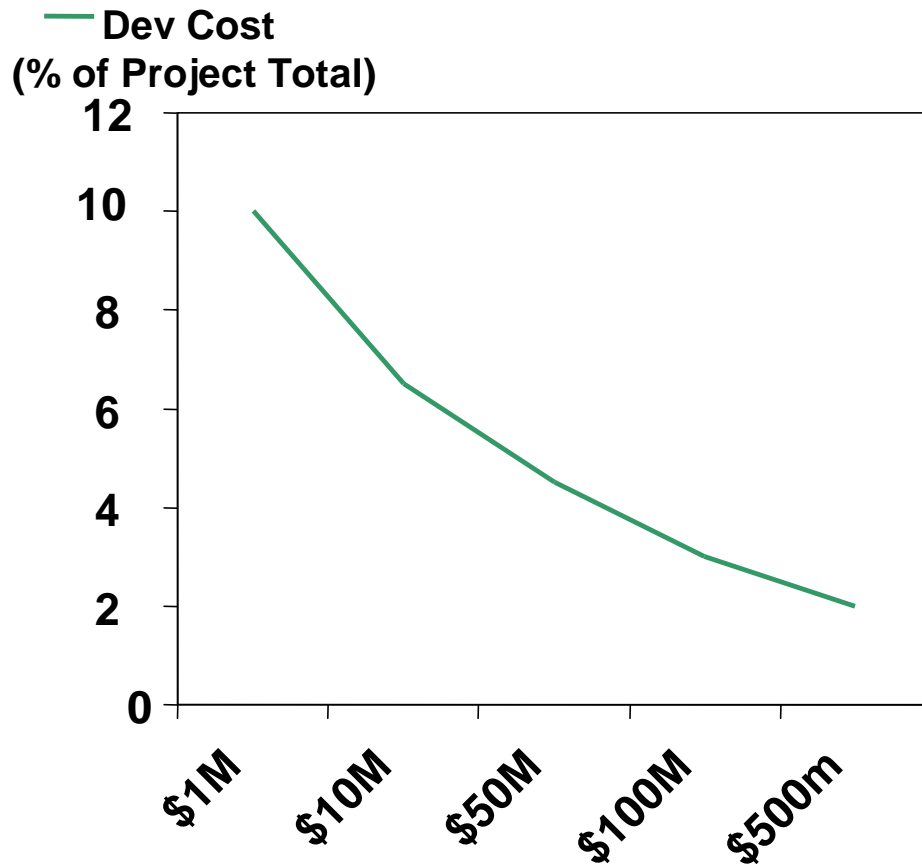
**Managing operations**

# Project Timing



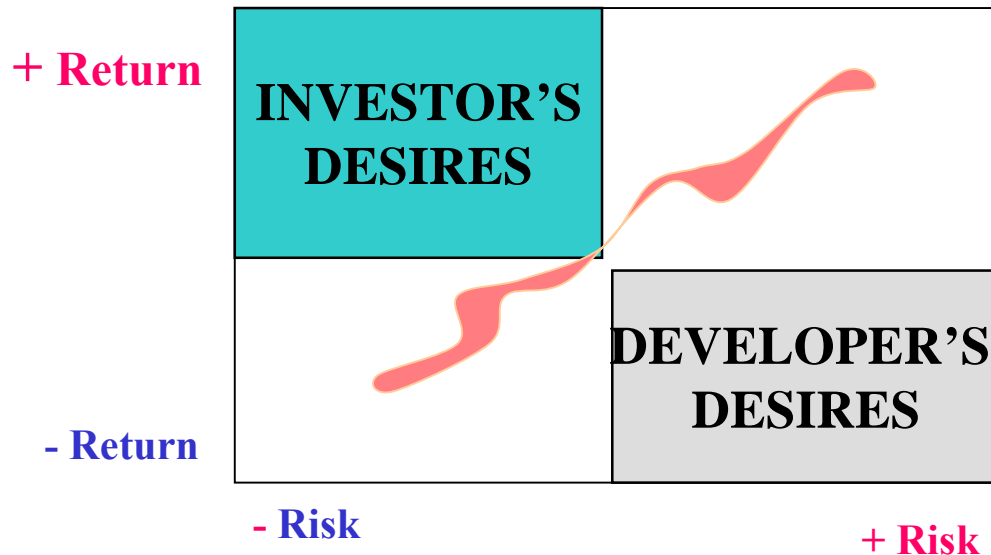
- Timing varies widely, but typically 18-24 months from project inception
- Development funding should be sufficient to last through the development.
- Fundraising may take 4-6 months after finalized “package” depending on complexity and structure

# Development finance



- Depending on size, development costs range from 2-10% of total project,
- Highest risk funding
- Highest rate of return money (30%-50%++)
- Development funding may be complimented with grants, loans

# Renewable Energy Project Finance Gap



(unsophisticated) Investor/ Lender

- I want 40% ++ with no risk
- Get me out next year with an IPO
- I will give you \$3 million Pre-money valuation

Developer

- Investors should invest in my project because it is the socially responsible thing to do
- Let's get going, will fill in the details later
- I give you slightly better than prime rate, so I can keep the majority of "my project"
- I'll offer you 5% of the project for \$80 million
- Don't look over my shoulder, I want a "silent partner"

# Project Finance

Proper structuring to balance debt and equity can reduce risk & improve returns

The larger the project, the more complexity & possibilities of improvement through structuring

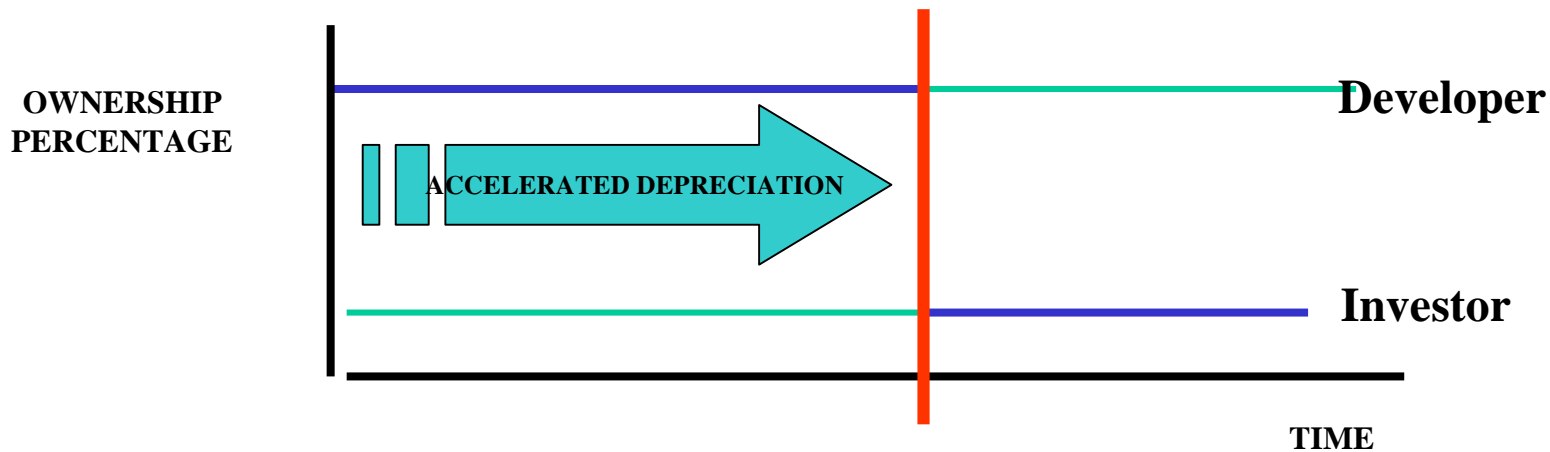
## Debt

- Construction
- Permanent Finance
- Bonds (taxable and exempt)
- Equipment / Operational Lease
- Mezzanine (limited)
- Grants & government loans

## Equity

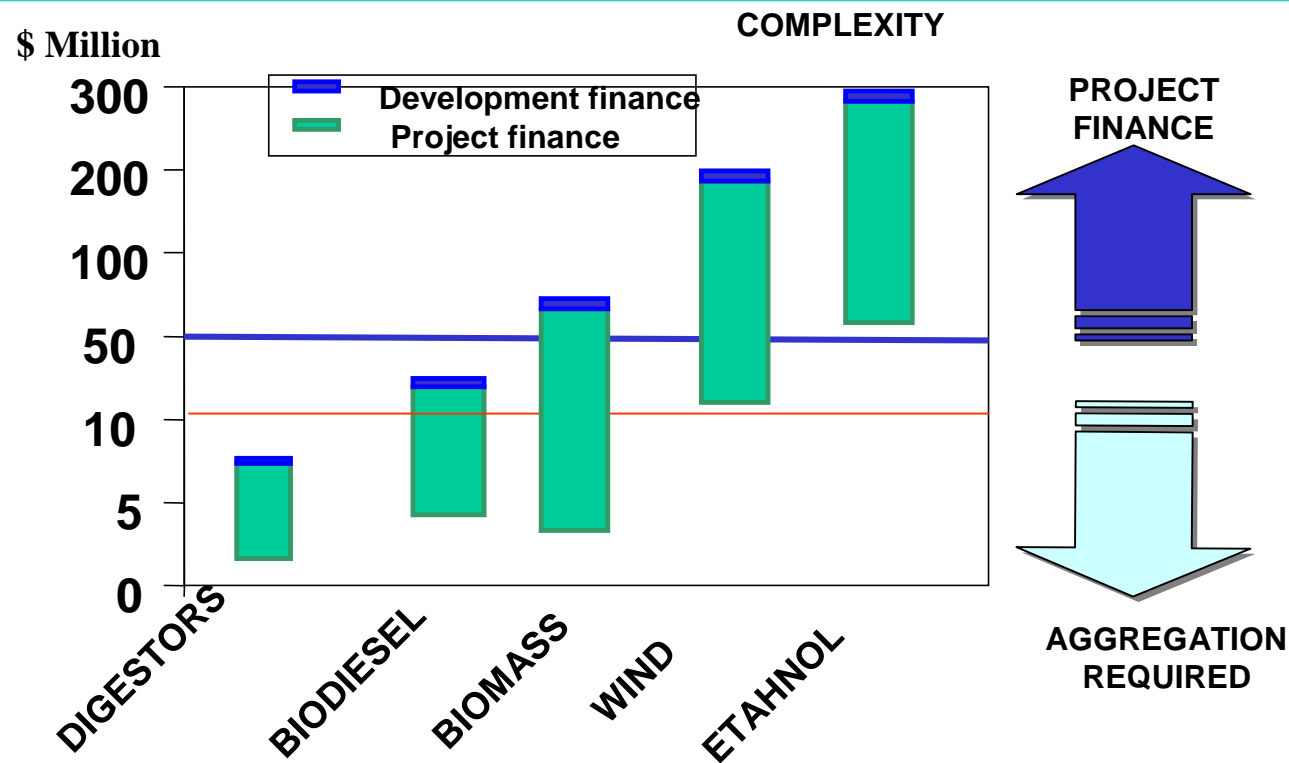
- Private-accredited
- Institutional
- Socially Responsible Investors
- Strategic & Vendor Finances
- Tax investors

# Tax investment



- Initial (3-5 years) depreciation in excess of project's ability to use it
- “Sell” the majority of the project to investor who can tax losses against passive gains
- “Flip” back to the developer (ratio reversed) after investor returns are realized
- Complex structures, requiring legal and accounting professionals skilled in the issues

# Economy of Scale: Size vs complexity



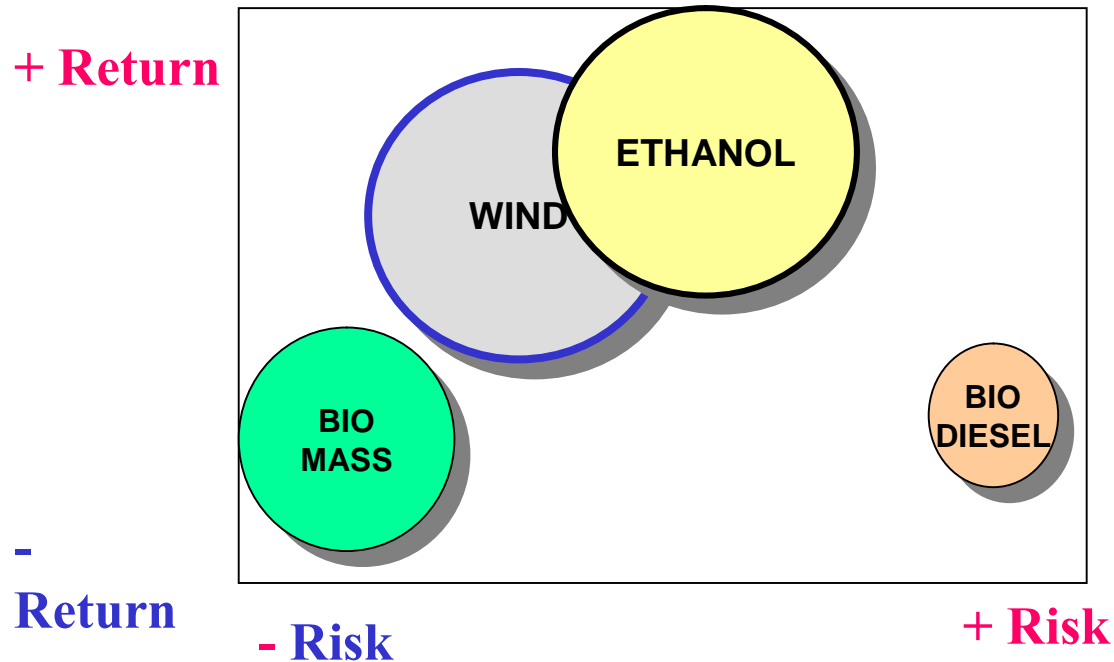
- Larger transactions: (ethanol, wind, biomass power generation) more complex, require substantial structuring
- Smaller transactions: (bio diesel, Anaerobic digesters) less complex, require little or no structuring
- Investment banking generally required to structure larger transactions
- Investment in smaller transactions better suited to aggregation

# What do we look for?

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- The risk/return profile and valuation are consistent with the deal structure and company expectations
- Project finance/development funding requirements consistent with the development cycle
- Management team has the experience and capability for the project undertaken
- The project is realistic and major risks are mitigated
  - Feedstock agreements
  - Offtake agreements (Merchant vs. contract)
  - Creditworthiness of Offtake purchasers
  - Technology risk/obsolescence
  - Performance bonding/ Construction risk

# What Does It All Mean?



- Financial markets: frothy
  - Unknowledgeable investors will fall into failed deals?
  - What happens in the overbuilt over hyped short/medium term: Dot.Bomb shakeout coming?
  - Long term prospect: Overall, excellent, returns will improve as oil prices increase and developers mature
- Best near term investments are ethanol, wind, longer term biomass

# *Sigma Capital Group*



**TURNING RENEWABLES INTO SHAREHOLDER VALUE**

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