

Renewable Biomass Power

Key Considerations

WV Governor's Energy Summit

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ADAGE™

www.adagebiopower.com

Why BioPower

- Provides **base-load, carbon-neutral**, alternative to fossil fuel that contributes to our energy security
- Biopower is a **sustainable**, natural resource that creates local investment opportunities and hundreds of **green jobs**
- Is a regional asset that will **help meet Renewable Standards** where solar or wind are not enough
- Promotes forest health by supporting **best practices in forest management**



US Dept Of Energy estimates that our country has enough sustainable forest resources to generate over 30,000 MW.

Jobs

~~5%~~

~~50%~~

~~500%~~

5,000%

Jobs

Jobs per MW

5,000% = Biomass / NGCC

NGCC <> Natural Gas Combined Cycle

Golden Rule

**Above All Else Remember
The Golden Rule**

Golden Rule

**Above All Else Remember
The Golden Rule
Whoever Has The Gold
Makes The Rules**

Top Ten Questions To Ask When Initiating A Renewable Biomass Power Project

- #1. Who Can Provide \$100 To \$125 M in Equity?**
- #2. Who Can Secure A \$100 To \$125 M Loan?**
- #3. Who Do You Want For A Twenty Year Partner?**
- #4. How Will The Biomass Supplier Be Equitably Compensated Over 20 Years?**
- #5. Who Has Expertise, Experience, and Ability To Successfully Negotiate A Long Term Power Purchase Agreement ?**
- #6. Who Will A Power Off-Taker View As A Viable Entity For A 20 Year O&M Function ?**
- #7. Does The Developer Have Demonstrated Experience, Expertise and A Proven Track Record That A Lender Will Require Before Letting Loose Of \$100+ M?**
- #8. Is Developer's Intent „Build/Own/Operate“ Or Develop To A Point & Flip, and If Flip – “Who Might Be Your Future Partner”?**
- #9. What's Current Status Of Developer's Other Announced Projects Vs. The Schedule Issued With Announcement?**
- #10. Are You Starting With A Thoroughbred or With A Want-To-Be, Or “Will The Horse You Pick Finish The Race”?**

Why Not Two Thoroughbreds ?



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AREVA Duke Advanced Green Energy

ADAGE - Our Investor Companies



- Launched At 09/2008 Clinton Global Initiative
- Joint Venture between AREVA & Duke Energy
- Plan to develop, build, own and operate twelve 50 MW biopower energy plants in the continental U.S. that utilize wood waste to produce green electricity for sale to utilities and municipal electric companies



- Fortune 500 company
- Assets over \$43 billion
- 3.9 million customers
- Top 5 for U.S. generating capacity with over 35,000 MW of power generation
- 150+ years of service
- Stock dividends for 80+ years



AREVA

- The no. 1 nuclear energy products and services vendor in America.
- AREVA has over 6,000 employees in the U.S. and ~\$2 Billion of U.S. revenue
- AREVA is a world BioMass leader with 2,500+ MW installed



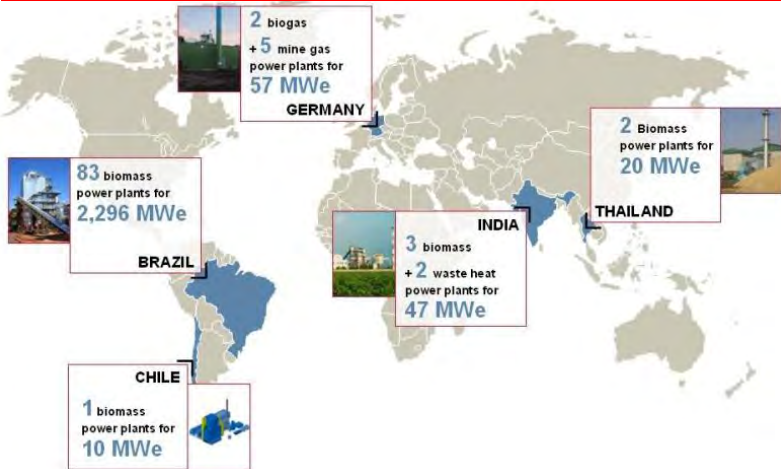
ADAGE

ADAGE - Experience Counts !

DEGS has proven track record creating sustained value for large energy consumers, utilities, industrial facilities and municipalities, including:



AREVA: Global BioPower Leader



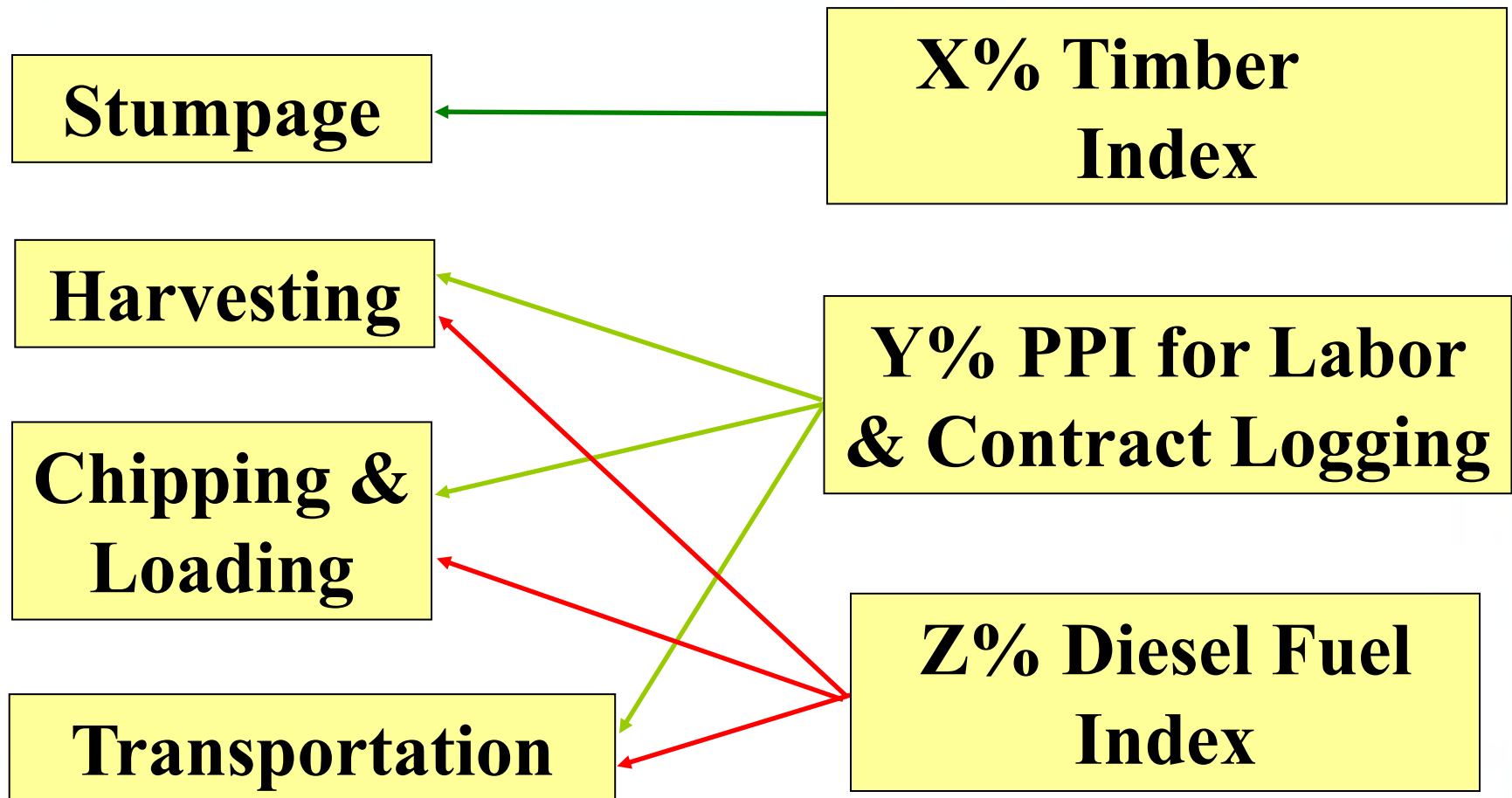
Approaching \$ 1/4 Billion

Reference Plant

Fuel ← \$20 M/Yr

- Nominal 50 MW electric power plant , fleet concept provides additional savings
- Advanced fluidized bed system featuring low emissions & high efficiency
- Maximum speed to market by permitting as a minor source
- Air cooled condensers with very low water consumption

Conceptual Escalation Adjustment



Escalation Adjustment - Example

<u>Period</u>		<u>2Q2010</u>	<u>3Q2012</u>		<u>2Q2010</u>	<u>3Q2012</u>
Stumpage	100% TI	1.000	1.100	1.100	\$6.00	\$6.60
Harvesting	75% LI	1.000	1.100	1.200	\$6.00	\$7.20
	25% DI	1.000	1.500			
Chipping & Loading	50% LI	1.000	1.100	1.300	\$6.00	\$7.80
	50% DI	1.000	1.500			
Transportation	25% LI	1.000	1.100	1.400	\$6.00	\$8.40
	75% DI	1.000	1.500			
Delivered Biomass					\$24.00	\$30.00

ADAGE

Hamilton Project Status



Current Activities:

- Pre-construction project site design and assessment

- Secure Florida environmental permits
- Finalizing fuel supply and renewable power sale agreements
- Moving from preliminary finance structuring to final financing
- Continuing to maximize community support and participation
- ADAGE takes responsibility for Project Design, Permitting, Finance, Construction, and ongoing management (O&M) activities
- Project generates 400+ construction jobs & 150 direct permanent jobs
- Power to be sold within Florida; Fuel to be supplied by Langdale Co.
- Prepare to execute our option to acquire 210 acre site

Thank You



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