# input

## GenericPowerOnly

{

"model": "generic-power-only",

"CapitalCost": 70000000,

"NetPlantCapacity": 25000,

"CapacityFactor": 85,

"NetStationEfficiency": 20,

"FuelHeatingValue": 18608,

"FuelAshConcentration": 5,

"FuelCost": 22.05,

"LaborCost": 2000000,

"MaintenanceCost": 1500000,

"InsurancePropertyTax": 1400000,

"Utilities": 200000,

"AshDisposal": 100000,

"Management": 200000,

"OtherOperatingExpenses": 400000,

"FederalTaxRate": 34,

"StateTaxRate": 9.6,

"ProductionTaxCredit": 0.009,

"DebtRatio": 75,

"InterestRateOnDebt": 5,

"EconomicLife": 20,

"CostOfEquity": 15,

"CapacityPayment": 166,

"InterestRateonDebtReserve": 5,

"GeneralInflation": 2.1,

"EscalationFuel": 2.1,

"EscalationForProductionTaxCredit": 2.1,

"EscalationOther": 2.1,

"TaxCreditFrac": [1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0]

}

## GenericCombinedHeatPower

{

"model": "generic-combined-heat-power",

"CapitalCost": 70000000,

"GrossElectricalCapacity": 28000,

"NetElectricalCapacity": 25000,

"CapacityFactor": 85,

"NetStationEfficiency": 20,

"FuelHeatingValue": 18608,

"FuelAshConcentration": 5,

"AggregateFractionOfHeatRecovered": 60,

"AggregateSalesPriceForHeat": 0.0102,

"FuelCost": 22.05,

"LaborCost": 2000000,

"MaintenanceCost": 1500000,

"InsurancePropertyTax": 1400000,

"Utilities": 200000,

"AshDisposal": 100000,

"Management": 200000,

"OtherOperatingExpenses": 400000,

"FederalTaxRate": 34,

"StateTaxRate": 9.6,

"ProductionTaxCredit": 0.009,

"DebtRatio": 75,

"InterestRateOnDebt": 5,

"EconomicLife": 20,

"CostOfEquity": 15,

"CapacityPayment": 166,

"InterestRateonDebtReserve": 5,

"GeneralInflation": 2.1,

"EscalationFuel": 2.1,

"EscalationForProductionTaxCredit": 2.1,

"EscalationHeatSales": 2.1,

"EscalationOther": 2.1,

"TaxCreditFrac": [1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0]

}

## GasificationPower

{

"model": "gasification-power",

"BtuPerCubicFoot": 150,

"BtuPerPound": 8000,

"MetricTonsPerHour": 24,

"DollarPerMetricTons": 20,

"CubicFootPerPonds": 5.6,

"DollarPerMillionBtu": 5,

"GasolineDensity": 750,

"GasolineHigherHeatingValueMjPerKg": 47.3,

"GasolineLowerHeatingValueMjPerKg": 44,

"LightDieselDensity": 810,

"LightDieselHigherHeatingValueMjPerKg": 46.1,

"LightDieselLowerHeatingValueMjPerKg": 43.2,

"HeavyDieselDensity": 850,

"HeavyDieselHigherHeatingValueMjPerKg": 45.5,

"HeavyDieselLowerHeatingValueMjPerKg": 42.8,

"NaturalGasDensity": 0.724,

"NaturalGasHigherHeatingValueMjPerKg": 50,

"NaturalGasLowerHeatingValueMjPerKg": 45,

"COHigherHeatingValueMjPerKg": 10.1,

"COLowerHeatingValueMjPerKg": 10.1,

"H2HigherHeatingValueMjPerKg": 142,

"H2LowerHeatingValueMjPerKg": 120,

"CH4HigherHeatingValueMjPerKg": 55.5,

"CH4LowerHeatingValueMjPerKg": 50,

"GasifierSystemCapitalCost": 300000,

"GasCleaningSystemCapitalCost": 50000,

"PowerGenerationCapitalCost": 450000,

"EmissionControlSystemCapitalCost": 25000,

"HeatRecoverySystemCapitalCost": 50000,

"GrossElectricalCapacity": 650,

"NetElectricalCapacity": 500,

"CapacityFactor": 85,

"HHVEfficiencyOfGasificationSystem": 65,

"NetHHVEfficiencyofPowerGeneration": 23,

"FractionOfInputEnergy": 20,

"CleanGasComposition": 0,

"CO": 20,

"HydrogenGas": 12,

"Hydrocarbons": 5,

"CarbonDioxide": 12,

"Oxygen": 0,

"HigherHeatingValue": 18608,

"MoistureContent": 15,

"AshContent": 5,

"CarbonConcentration": 30

}

## Hydrogen

{

"model": "hydrogen",

"GrossDesignHydrogenCapacity": 158366.518706405,

"HydrogenHHV": 141.93,

"HydrogenLHV": 119.98,

"Feedstock": 19.3498437209302,

"OverallProductionEfficiency": 60.5,

"CapacityFactor": 91.324200913242,

"CapitalCost": 206500000,

"FeedstockCost": 38.7,

"OperatingExpensesRate": 4,

"ElectricalEnergy": 2,

"IncentivePayments": 2,

"Capacity": 2,

"Heat": 2,

"Residues": 2,

"FederalTaxRate": 34,

"StateTaxRate": 9.3,

"ProductionTaxCredit": 0.09,

"NegativeTaxesOffset": true,

"GeneralInflation": 2.1,

"EscalationFeedstock": 2.1,

"EscalationElectricalEnergy": 2.1,

"EscalationIncentivePayments": 2.1,

"EscalationCapacityPayment": 2.1,

"EscalationProductionTaxCredit": 2.1,

"EscalationHeatSales": 2.1,

"EscalationResidueSales": 2.1,

"EscalationOther": 2.1,

"DebtRatio": 90,

"InterestRateOnDebt": 5,

"OneYearDebtReserveRequired": true,

"MARR": 15,

"EconomicLife": 15,

"InterestRateOnDebtReserve": 2,

"TaxCreditFrac": [1,1,1,1,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0]

}