

# Simple Project Calculator

## Project Details

Project	Hydroelectric power plant
Scenario	P50
Community	Somewhere, Croatia
Turbine	Generic
Last update	10-Jun-2012 5:49 PM
Input validation	OK

## Project Data

Project type	Hydropower
Country	Croatia
Project start	01-Jan-2013
Project Tenor	20
End date	1/1/2033
Turnkey	2,000,000
Project IRR (input)	10.00%

## Equity

Amount %	25.0%
Amount	500,000
Equity IRR (input)	12.00%

## Debt

Interest rate	6.0%
Amount	1,500,000
Financial Tenor	14
Repayment type	Annuity
DSCR (input)	1.4

## Tax

Tax rate	20%
Depreciation Tenor	20

## Other Details

Nominal output [kW]	500
Total nominal output [kW]	500
Power reduction / year	0.00%
Inflation	2%
Start of operation	1. Quarter 2013
Net output p.a. [kWh]	4,000,000

## Results

Project IRR	10.019%
Equity IRR	12.316%
DSCR min.	1.425
DSCR avg.	1.549
Turnkey/kW	4,000
Full load [h]	8,000
Capacity factor	91.32%

## Financial numbers

	1. Year	10. Year	20. Year
Tax	10,000	29,207	18,520
EBITDA	240,000	286,822	192,598
Annual net profit/loss	40,000	116,828	74,078
Depreciation p.a.	100,000	100,000	100,000

## Simple Project Calculator

### Cashflow / Cash Balance

Project year		1	2	3	4	5	6	7	8	9	10
End of year	SUM	Dec-2013	Dec-2014	Dec-2015	Dec-2016	Dec-2017	Dec-2018	Dec-2019	Dec-2020	Dec-2021	Dec-2022
<b>Revenues</b>											
Production	80,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Tariff	-	0.0800	0.0816	0.0832	0.0849	0.0866	0.0883	0.0901	0.0919	0.0937	0.0956
<b>Revenues</b>	<b>6,877,934</b>	<b>320,000</b>	<b>326,400</b>	<b>332,928</b>	<b>339,587</b>	<b>346,378</b>	<b>353,306</b>	<b>360,372</b>	<b>367,579</b>	<b>374,931</b>	<b>382,430</b>
<b>Operating Costs</b>											
Lease costs	-										
Insurance	-										
Maintenance	-										
Operation/Administrative Expenses	-										
Fuel costs	-										
Own energy consumption	-										
Other Costs	1,943,790	80,000	81,600	83,232	84,897	86,595	88,326	90,093	91,895	93,733	95,607
<b>Operating Expenditures</b>	<b>1,943,790</b>	<b>80,000</b>	<b>81,600</b>	<b>83,232</b>	<b>84,897</b>	<b>86,595</b>	<b>88,326</b>	<b>90,093</b>	<b>91,895</b>	<b>93,733</b>	<b>95,607</b>
<b>EBITDA</b>	<b>4,934,144</b>	<b>240,000</b>	<b>244,800</b>	<b>249,696</b>	<b>254,690</b>	<b>259,784</b>	<b>264,979</b>	<b>270,279</b>	<b>275,685</b>	<b>281,198</b>	<b>286,822</b>
<b>Debt</b>											
Interest	759,283	90,000	85,717	81,178	76,366	71,265	65,858	60,127	54,052	47,613	40,787
Repayment	1,500,000	71,377	75,660	80,200	85,012	90,112	95,519	101,250	107,325	113,765	120,591
Outstanding	-	1,428,623	1,352,963	1,272,763	1,187,751	1,097,639	1,002,120	900,870	793,545	679,780	559,190
<b>Debt Service</b>	<b>2,259,283</b>	<b>161,377</b>	<b>161,377</b>	<b>161,377</b>	<b>161,377</b>	<b>161,377</b>	<b>161,377</b>	<b>161,377</b>	<b>161,377</b>	<b>161,377</b>	<b>161,377</b>
<b>Debt service coverage ratio</b>	<b>-</b>	<b>1.425</b>	<b>1.444</b>	<b>1.462</b>	<b>1.481</b>	<b>1.500</b>	<b>1.519</b>	<b>1.538</b>	<b>1.558</b>	<b>1.577</b>	<b>1.596</b>
<b>Cashflow before Tax</b>	<b>2,674,861</b>	<b>78,623</b>	<b>83,423</b>	<b>88,319</b>	<b>93,313</b>	<b>98,406</b>	<b>103,602</b>	<b>108,902</b>	<b>114,307</b>	<b>119,821</b>	<b>125,445</b>
<b>Tax</b>											
Depreciation	2,000,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Tax	434,972	10,000	11,817	13,704	15,665	17,704	19,824	22,030	24,326	26,717	29,207
<b>Cashflow after Tax</b>	<b>2,239,889</b>	<b>68,623</b>	<b>71,606</b>	<b>74,615</b>	<b>77,648</b>	<b>80,703</b>	<b>83,778</b>	<b>86,871</b>	<b>89,981</b>	<b>93,104</b>	<b>96,238</b>
<b>Financial ratios</b>											
EBITDA	4,934,144	240,000	244,800	249,696	254,690	259,784	264,979	270,279	275,685	281,198	286,822
EBIDA	4,499,172	230,000	232,983	235,992	239,025	242,080	245,155	248,249	251,358	254,481	257,615
EBIT	2,934,144	140,000	144,800	149,696	154,690	159,784	164,979	170,279	175,685	181,198	186,822
EBT	2,174,861	50,000	59,083	68,518	78,324	88,519	99,121	110,152	121,632	133,586	146,035
<b>Annual net profit/loss</b>	<b>1,739,889</b>	<b>40,000</b>	<b>47,266</b>	<b>54,815</b>	<b>62,659</b>	<b>70,815</b>	<b>79,297</b>	<b>88,121</b>	<b>97,306</b>	<b>106,868</b>	<b>116,828</b>
<b>Distribution</b>											
Distribution	2,239,889	68,623	71,606	74,615	77,648	80,703	83,778	86,871	89,981	93,104	96,238
<b>Cum. Distribution</b>	<b>2,239,889</b>	<b>68,623</b>	<b>140,229</b>	<b>214,844</b>	<b>292,491</b>	<b>373,194</b>	<b>456,972</b>	<b>543,843</b>	<b>633,824</b>	<b>726,928</b>	<b>823,165</b>
<b>Distribution % of Investment</b>	<b>448.0%</b>	<b>13.7%</b>	<b>28.0%</b>	<b>43.0%</b>	<b>58.5%</b>	<b>74.6%</b>	<b>91.4%</b>	<b>108.8%</b>	<b>126.8%</b>	<b>145.4%</b>	<b>164.6%</b>

## Simple Project Calculator

### Cashflow / Cash Balance

Project year		11	12	13	14	15	16	17	18	19	20
End of year	SUM	Dec-2023	Dec-2024	Dec-2025	Dec-2026	Dec-2027	Dec-2028	Dec-2029	Dec-2030	Dec-2031	Dec-2032
<b>Revenues</b>											
Production	80,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Tariff	-	0.0975	0.0995	0.1015	0.1035	0.0700	0.0714	0.0728	0.0743	0.0758	0.0773
<b>Revenues</b>	<b>6,877,934</b>	<b>390,078</b>	<b>397,880</b>	<b>405,837</b>	<b>413,954</b>	<b>280,000</b>	<b>285,600</b>	<b>291,312</b>	<b>297,138</b>	<b>303,081</b>	<b>309,143</b>
<b>Operating Costs</b>											
Lease costs	-										
Insurance	-										
Maintenance	-										
Operation/Administrative Expenses	-										
Fuel costs	-										
Own energy consumption	-										
Other Costs	1,943,790	97,520	99,470	101,459	103,489	105,558	107,669	109,823	112,019	114,260	116,545
<b>Operating Expenditures</b>	<b>1,943,790</b>	<b>97,520</b>	<b>99,470</b>	<b>101,459</b>	<b>103,489</b>	<b>105,558</b>	<b>107,669</b>	<b>109,823</b>	<b>112,019</b>	<b>114,260</b>	<b>116,545</b>
<b>EBITDA</b>	<b>4,934,144</b>	<b>292,559</b>	<b>298,410</b>	<b>304,378</b>	<b>310,466</b>	<b>174,442</b>	<b>177,931</b>	<b>181,489</b>	<b>185,119</b>	<b>188,821</b>	<b>192,598</b>
<b>Debt</b>											
Interest	759,283	33,551	25,882	17,752	9,135	-	-	-	-	-	-
Repayment	1,500,000	127,826	135,496	143,625	152,243	-	-	-	-	-	-
Outstanding	-	431,364	295,868	152,243	-	-	-	-	-	-	-
<b>Debt Service</b>	<b>2,259,283</b>	<b>161,377</b>	<b>161,377</b>	<b>161,377</b>	<b>161,377</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Debt service coverage ratio</b>	<b>-</b>	<b>1.616</b>	<b>1.635</b>	<b>1.655</b>	<b>1.674</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>Cashflow before Tax</b>	<b>2,674,861</b>	<b>131,181</b>	<b>137,032</b>	<b>143,001</b>	<b>149,088</b>	<b>174,442</b>	<b>177,931</b>	<b>181,489</b>	<b>185,119</b>	<b>188,821</b>	<b>192,598</b>
<b>Tax</b>											
Depreciation	2,000,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Tax	434,972	31,801	34,506	37,325	40,266	14,888	15,586	16,298	17,024	17,764	18,520
<b>Cashflow after Tax</b>	<b>2,239,889</b>	<b>99,380</b>	<b>102,527</b>	<b>105,675</b>	<b>108,822</b>	<b>159,553</b>	<b>162,344</b>	<b>165,191</b>	<b>168,095</b>	<b>171,057</b>	<b>174,078</b>
<b>Financial ratios</b>											
EBITDA	4,934,144	292,559	298,410	304,378	310,466	174,442	177,931	181,489	185,119	188,821	192,598
EBIDA	4,499,172	260,757	263,904	267,053	270,199	159,553	162,344	165,191	168,095	171,057	174,078
EBIT	2,934,144	192,559	198,410	204,378	210,466	74,442	77,931	81,489	85,119	88,821	92,598
EBT	2,174,861	159,007	172,528	186,626	201,331	74,442	77,931	81,489	85,119	88,821	92,598
<b>Annual net profit/loss</b>	<b>1,739,889</b>	<b>127,206</b>	<b>138,022</b>	<b>149,301</b>	<b>161,065</b>	<b>59,553</b>	<b>62,344</b>	<b>65,191</b>	<b>68,095</b>	<b>71,057</b>	<b>74,078</b>
<b>Distribution</b>											
Distribution	2,239,889	99,380	102,527	105,675	108,822	159,553	162,344	165,191	168,095	171,057	174,078
Cum. Distribution	2,239,889	922,545	1,025,072	1,130,748	1,239,570	1,399,123	1,561,467	1,726,659	1,894,754	2,065,811	2,239,889
Distribution % of Investment	448.0%	184.5%	205.0%	226.1%	247.9%	279.8%	312.3%	345.3%	379.0%	413.2%	448.0%

