



Ferramenta de Tarifas para a Geração Distribuída: Visão Geral

*Apoio à Formulação de Tarifas para a GD
2-5 Setembro de 2024*

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Visão Geral da Ferramenta de Tarifas

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Distributed Generation Revenue Impact and Tariff Setting Model for Electricity Utilities




ESWATINI

Main Menu



User instructions



Standard model inputs



Printable report



Map



Solar PV output



Revenue from other customers



VOS



Financial impact model results



Prodn and constn



PV prodn for 25 years



Advanced model inputs



Customer load usage profiles



NPV calculations



Business case results



Avg tariff calc



Revenue from SSEG customers

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Acknowledgements – Revenue impact model developers and program partners:



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Função da Ferramenta

Resumindo...

- **Destinada a Serviços Públicos**, embora outros possam também achá-la útil (reguladores, ministérios, clientes, etc.)
- **O Objectivo Principal** é o de apoiar Serviços Públicos com a formulação de tarifas para a GD, ao proporcionar-se a verificação transversal do impacto em receitas
- **Inclui dois (2) modelos:**
 - **Modelo 1:** Avalia o impacto em receitas do serviço público pelas diferentes tarifas de GD
 - **Modelo 2:** Esclarece as perspectivas comerciais para o cliente de GD
 - Garante que as tarifas equilibram os interesses, tanto dos clientes como dos serviços públicos, e apoiam os objectivos da política de energias renováveis

Só FV solar

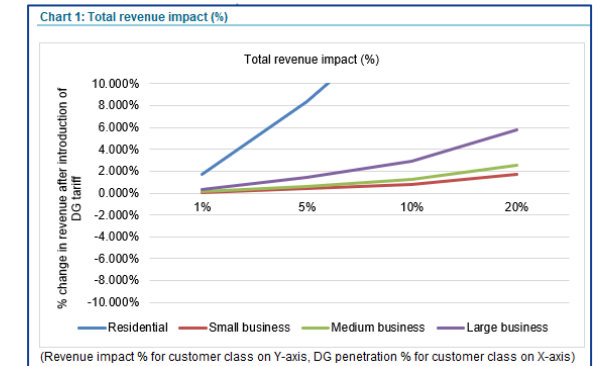


Table 3: Reduction in revenue, Value of Solar and Total effect (\$m)

	Residential	Small business	Medium business	Large business	Total
1% of customers install rooftop PV					
Reduction in revenue (\$m) (A)	-5.9	-0.7	-0.3	-0.1	-7.1
Value of Solar (\$m) (B)	18.6	0.8	0.6	0.2	20.2
Total effect (\$m) (A + B)	12.7	0.1	0.3	0.1	13.1
5% of customers install rooftop PV					
Reduction in revenue (\$m) (A)	-29.4	-3.7	-1.6	-0.7	-35.4
Value of Solar (\$m) (B)	92.8	4.2	2.9	1.1	101.0
Total effect (\$m) (A + B)	63.4	0.5	1.3	0.4	65.6

Table 4: Business case for the Solar PV customer for the chosen DG tariffs

	Residential	Small business	Medium business	Large business
Net present value (\$)	10 074	386 155	3 534 003	1 445 839
Pay-back period (PBP) (Years)	18	6	10	8
Internal rate of return	4%	19%	10%	15%
LCOE (\$)	1.18	1.23	1.12	1.06
Monthly bill for one Solar PV customer (\$)	\$ 55	\$ 1 537	\$ 269 545	\$ 10 518

Contributos → Processamento → Resultados

Processamento / Lógica de Avaliação

- Reduções de Receitas
- VS
- Reduções de Custos
- Toma em consideração:
 - Tempo de uso
 - Perfis de carga
 - Carga da Bateria/Descarga
 - Escalonamentos, etc.

Redução de
Receitas

Compensação
de
Exportações

Redução de
vendas

Redução de
Custos

Electricidade
mais em conta
para venda
posterior

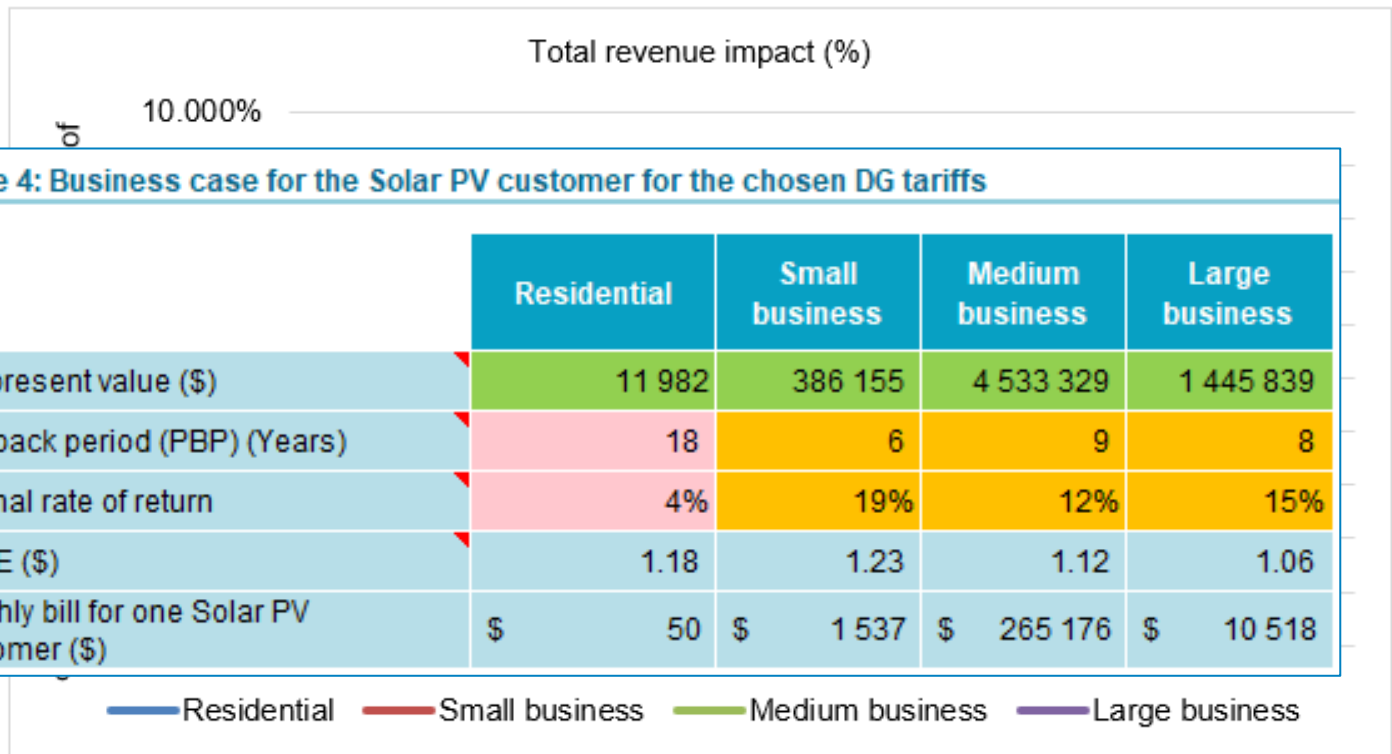
Custos
reduzidos de
energia em
grande
quantidade



Resultados

- **Modelo 1:** Impacto no total de receitas do serviço público
- **Modelo 2:** Perspectivas comerciais da GD


Chart 1: Total revenue impact (%)



(Revenue impact % for customer class on Y-axis, DG penetration % for customer class on X-axis)


Demonstração da Ferramenta...

Distributed Generation Revenue Impact and Tariff Setting Model for Electricity Utilities

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Muito Obrigado pela Vossa Atenção

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Ferramenta disponibilizada em:

<https://dg-africa.net/tariffs-revenue/>

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