



Broker Circular Solar Geyser Procurement Project Claims Services

1. Executive Overview

The Government Policy regarding the generation of electricity is that Eskom will provide 70% of the required new generation capacity while the Independent Power Producers (IPPs) will provide 30%.

The efficient use of electricity has become a national priority, a necessity for the future development of the South African economy and effective provision of electricity. Working towards these objectives is Eskom's Accelerated Energy Efficiency Plan (AEE Plan) that focuses on reducing electricity demand by 3 000MW by 2012, and a further 5 000MW by 2025.

The Department of Public Enterprise (DPE) has set themselves a target of 2 million solar geysers to be installed by 2010. The goal is to offer the consumer a solar geyser as an alternative to electrical heated geyser. However, before marketing of solar to the consumer can begin in earnest, the Department has identified the necessity to building capacity and facilitating:

- Training for the current labour market;
- New entrants to the current labour market;
- Quality Control through a legal registered entity;

The Santam initiative supports the "green energy" environment and collects rebates for every solar geyser being installed from "Eskom" regarding the use of solar energy as part of their AEE Plan, as well as carbon credits from "Unlimited Energies" in their strive to reduce the carbon footprint.

Santam will provide the finances upfront, together with a pre-calculated betterment amount payable by the client. Santam will then recover the allowable rebates and carbon claims from "Eskom and "Unlimited Energies" not to exceed the costs of the conventional geyser contributed by Santam.

The advantages for Santam to align internal and environmental policies with national priorities around energy efficiency will have the following key impacts and benefits:

- An offering to clients in terms of water heaters (geysers) that is more energy efficient
- A reduction in costs for insurance companies with regards to consequential damage in the case of burst geysers
- Longer lasting water heaters, if and when installed correctly
- A reduction in energy cost for the consumer when converting to or replacing with solar water heaters
- Skills development in the local plumbing industry
- Capacity building in the local manufacturing industry
- Overall efficient usage of energy in line with Santam's environmental policy

Water heating accounts for 30% - 50% of a household's electricity consumption and hence this initiative would largely contribute to energy saving and "green energy".

2. Process Description

The process is illustrated firstly on a high level, as follows;

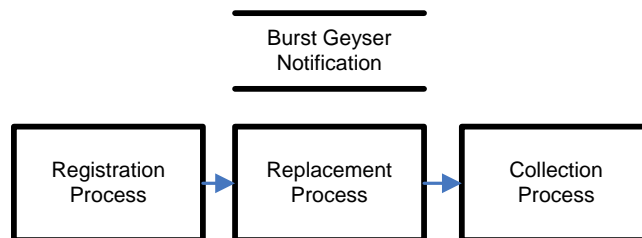


Figure 1: High Level Solar Geyser Replacement Process

The high level indicates that there are three major sub-processes in this process:

- 2.1 **Claims Registration Process** – register the claim and ascertain if a solar geyser is to be installed.



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Betterment / Settlement Agreement and Consent and Authorisation to be signed by Client

As Santam is giving the client an alternative option and not a straight-forward indemnification, there are certain conditions that the client needs to agree to before this replacement option can be elected.

Hence it is required that the client signs the betterment / settlement agreement, which stipulates that the Santam will contribute a certain amount to the replacement and that the client is obliged to make a certain contribution. A consent and authorization letter contains a clause in terms of which the client authorizes Santam to collect the Eskom rebate and carbon claim on the client's behalf. It also contains a clause in terms of which Santam will not be held liable by the plumber should the client fail to make the necessary payments.

The client would therefore be required to sign the betterment settlement agreement as stipulated in **Appendix B** and consent and authorization **Appendix A**, and make the betterment payment to Santam, prior to the replacement process commences.

2.2 Geyser Replacement Process – dispatch the supplier, install the appropriate geyser and pay the suppliers for the equipment and services rendered.

The Supplier is required to issue and or obtain the following documentation upon completion of the installation. The Eskom and Unlimited Energy rebates cannot be recovered without these documents and no payment will therefore be made unless the following documentation is received;

- CSI (**Appendix C**): The Supplier is required to provide the claimant with the document to complete, the Supplier completes his or her portion (the bar code must be completed) and returns to Santam;
- PIRB CoC (**Appendix D**): The Supplier must purchase the CoC from PIRB, complete and issue the document to the claimant. A copy of the CoC must be submitted to Santam. The certificate detail is to be inputted into the PIRB website;
- ECC (**Appendix F**): The Supplier is required to attain an ECC from a Licensed Electrician, provide the claimant with the document and submit a copy thereof to Santam;
- Eskom Claimant Declaration Form (**Appendix G**): The Supplier is required to present, have the claimant sign and return the form to Santam;
- Eskom Installer Declaration Form (**Appendix H**): The Supplier is required to complete and return the form to Santam;
- Scrapping verification document: The Supplier is required to remove and return geysers to the manufacturer

2.3 Rebate Collection Process – claim the appropriate rebates/credits for solar geyser installations and allocate to claim. These rebates/credits are not applicable on electrical geyser replacements.

3. Contribution Calculations

3.1 Santam Contribution

The current geyser claims are indemnified by Santam based on the current prices for electrical geysers and the associated installation fees.

(Calculated with % increase)

| Current Geyser Size | Santam's Contribution |
|---------------------|-----------------------|
| 100 Litre | R 5,108.72 |
| 150 Litre | R 5,411.45 |
| 200 Litre | R 6,073.26 |
| 250 Litre | R 8 625.64 |

Figure 2: Santam's current contribution on the replacement of electrical geysers

3.2 Eskom Contribution

This contribution is awarded to the claimant and is subtracted from the total cost. Santam merely assists by facilitating the collection process on the claimant's behalf, which is allocated back to the claim, once collected.



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Eskom contributes approximately 25% on the price of the SWH.

| DIRECT | | | | INDIRECT | | | |
|----------------|--------------------------------|----------|--------------------------------|----------------|--------------------------------|------------|--------------------------------|
| Size of Geyser | Eskoms Contribution (Vat Incl) | VAT | Eskoms Contribution (Vat Excl) | Size of Geyser | Eskoms Contribution (Vat Incl) | VAT | Eskoms Contribution (Vat Excl) |
| 100 litre | R 3,883.00 | R 476.86 | R 3,406.14 | 100 litre | R 3,883.00 | R 476.86 | R 3,406.14 |
| 150 litre | R 4,734.00 | R 581.37 | R 4,152.63 | 150 litre | R 4,233.00 | R 662.76 | R 3,570.24 |
| 200 litre | R 7,216.00 | R 886.18 | R 6,329.82 | 200 litre | R 6,778.00 | R 1,010.24 | R 5,767.76 |
| 250 litre | R 7,930.00 | R 973.86 | R 6,956.14 | 250 litre | R 6,496.00 | R 1,110.20 | R 5,385.80 |

Figure 3: Eskom Contribution

3.3 Carbon Credits Contribution

This contribution is awarded to the claimant and is subtracted from the total cost and is allocated back to the claim, once collected.

Carbon credits contribute an average of R1000,00 per SWH, depending on the exchange rate and SWH size.

| Size of Geyser | (VAT Excl) | VAT | (VAT Incl) |
|----------------|------------|---------|------------|
| 100 litre | R 877.19 | R122.81 | R 1,000.00 |
| 150 litre | R 877.19 | R122.81 | R 1,000.00 |
| 200 litre | R 877.19 | R122.81 | R 1,000.00 |
| 250 litre | R 877.19 | R122.81 | R 1,000.00 |

Figure 4: Carbon Credit Contribution

3.4 Client Contributions

Excess: As with any other claim, the claimant has to pay an excess towards the claim (as per the policy schedule).

Betterment: To cover the **shortfall** on the improvement of the claimant's risk prior to the claim, the claimant is also required to pay a **betterment** amount according to the following table:

The client betterment needs to be calculated as follows;

TOTAL COST of SWH replacement:

- SWH System (Suncol)
- Installation Cost
- Additional Cost
- ECC (Incl in installation fee)

LESS

- Santam Contribution
- Eskom Rebate
- Unlimited Energy Carbon Credits
- Excess

EQUALS Claimant betterment contribution

To cover the shortfall on the improvement of the client's risk prior to the claim, the client is also required to pay a betterment amount according to the following tables (pitch roof or flat roof):



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| Client Contribution Table | | Replacement Solar Water Heater System: DIRECT | | | | | | | | |
|---------------------------|-------------|---|------------|-------------|-------------------|-------------|-------------|------------------------|-------------|-------------|
| Pitch Roof: | Geyser Size | Close Couple | | | Split Termosiphon | | | Split Pump Circulation | | |
| | | 150 litre | 200 litre | 250 litre | 150 litre | 200 litre | 250 litre | 150 litre | 200 litre | 250 litre |
| Current Electrical Geyser | 150 litre | R 4,130.90 | R 7,616.80 | R 9,174.82 | R 4,662.48 | R 7,290.53 | R 8,857.27 | R 8,165.70 | R 10,793.75 | R 12,360.49 |
| | 200 litre | R 4,351.44 | R 5,995.10 | R 8,513.00 | R 4,000.66 | R 6,628.71 | R 8,195.45 | R 7,503.88 | R 10,131.93 | R 11,698.67 |
| | 250 litre | R 1,799.06 | R 4,402.60 | R 4,984.78 | R 1,448.28 | R 4,076.33 | R 5,643.07 | R 4,951.50 | R 7,579.55 | R 9,146.29 |
| Client Contribution Table | | Replacement Solar Water Heater System: INDIRECT | | | | | | | | |
| Pitch Roof: | Geyser Size | Close Couple | | | Split Termosiphon | | | Split Pump Circulation | | |
| | | 150 litre | 200 litre | 250 litre | 150 litre | 200 litre | 250 litre | 150 litre | 200 litre | 250 litre |
| Current Electrical Geyser | 150 litre | R 5,896.84 | R 9,591.74 | R 12,314.48 | R 6,428.42 | R 9,265.48 | R 11,996.94 | R 9,931.64 | R 13,728.58 | R 16,476.00 |
| | 200 litre | R 6,117.38 | R 7,970.05 | R 11,652.67 | R 5,766.60 | R 8,603.66 | R 11,335.12 | R 10,152.18 | R 12,106.88 | R 15,814.18 |
| | 250 litre | R 3,565.00 | R 6,377.55 | R 8,124.45 | R 3,214.23 | R 6,051.28 | R 8,782.74 | R 7,599.81 | R 10,514.38 | R 12,285.96 |
| Client Contribution Table | | Replacement Solar Water Heater System: DIRECT | | | | | | | | |
| Flat Roof: | Geyser Size | Close Couple | | | Split Termosiphon | | | Split Pump Circulation | | |
| | | 150 litre | 200 litre | 250 litre | 150 litre | 200 litre | 250 litre | 150 litre | 200 litre | 250 litre |
| Current Electrical Geyser | 150 litre | R 5,013.26 | R 7,616.80 | R 9,174.82 | R 5,544.84 | R 8,250.41 | R 9,833.11 | R 9,048.06 | R 11,753.63 | R 13,336.33 |
| | 200 litre | R 4,351.44 | R 6,954.98 | R 8,513.00 | R 4,883.02 | R 7,588.59 | R 9,171.29 | R 8,386.24 | R 11,091.81 | R 12,674.51 |
| | 250 litre | R 1,799.06 | R 4,402.60 | R 5,960.62 | R 2,330.64 | R 5,036.21 | R 6,618.91 | R 5,833.86 | R 8,539.43 | R 10,122.13 |
| Client Contribution Table | | Replacement Solar Water Heater System: INDIRECT | | | | | | | | |
| Flat Roof: | Geyser Size | Close Couple | | | Split Termosiphon | | | Split Pump Circulation | | |
| | | 150 litre | 200 litre | 250 litre | 150 litre | 200 litre | 250 litre | 150 litre | 200 litre | 250 litre |
| Current Electrical Geyser | 150 litre | R 6,779.20 | R 9,591.74 | R 12,314.48 | R 7,310.78 | R 10,225.36 | R 12,972.78 | R 10,814.00 | R 13,728.58 | R 16,476.00 |
| | 200 litre | R 6,117.38 | R 8,929.93 | R 11,652.67 | R 6,648.96 | R 9,563.54 | R 12,310.96 | R 10,152.18 | R 13,066.76 | R 15,814.18 |
| | 250 litre | R 3,565.00 | R 6,377.55 | R 9,100.29 | R 4,096.59 | R 7,011.16 | R 9,758.58 | R 7,599.81 | R 10,514.38 | R 13,261.80 |

Figure 5: Client contribution matrix



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4. Benefit Calculations

The benefit that the client would experience from this initiative is largely a function of the average household electricity bill. It is stated by Eskom that a saving between 30% - 50% would be enjoyed through the installation of a Solar Geyser.

Therefore, based on worst case of 30%, the client would enjoy the following savings:

| Monthly Electricity Bill | Savings (%) | Savings per Month | Savings per Year |
|--------------------------|-------------|-------------------|------------------|
| R 500 | 30% | R 150.00 | R 1,800.00 |
| R 1,000 | 30% | R 300.00 | R 3,600.00 |
| R 1,500 | 30% | R 450.00 | R 5,400.00 |
| R 2,000 | 30% | R 600.00 | R 7,200.00 |
| R 2,500 | 30% | R 750.00 | R 9,000.00 |
| R 3,000 | 30% | R 900.00 | R 10,800.00 |

Figure 5: Estimated Savings on Household Electricity Bill

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