

SECURE



AN INDUSTRY ICON



SAVE



SUSTAIN



AGM 2016

Fancourt Golf Resort, George
28-29 April 2016



STYLISH





TECHNICAL REPORT

53rd Annual General Meeting

Fancourt Golf Resort, George

29 April 2016

John Volsteedt
Energy Efficient Clay Brick Project



AGM 2016

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Clay Brick Sustainability Initiative

Verification

Compliance

CO2

Heat Recovery
Systems Optimisation
Energy Management
Thermal Efficiency

ESCO

MJ/kg

Energy Plan Environmental Protection

Economic Benefit

Awards

Sector Survey

Technology

Waste

Benchmarks

Energy Audits

Thermal Tool

Best Practice

Energy Guidelines
Targets
Renewables

Sustainability

Funding

Calorific Value

Stakeholder Dialogue

Life Cycle Assessment

Technical Services

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development
and Cooperation SDC

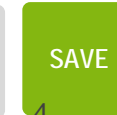
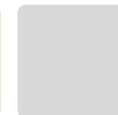
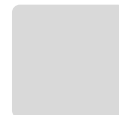


Sector Participation

Thank you for your participation :

- Sharing your implemented EnE Measures
- Participating in benchmarking and surveys
- Collaborating with producers and suppliers
- Contributing to development of Energy guidelines
- Collaborating in implementation of Energy Management Systems
- Taking part in subsidised EnMS training

**The success of EECB is measured by what you achieve
and save through energy efficiency**

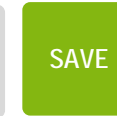
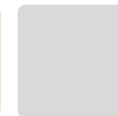
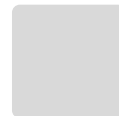


Highlights from the past year

BRICK MAKERS ADOPT ENERGY EFFICIENT NEW / IMPROVED TECHNOLOGIES

VSBK kilns : Total of four sites

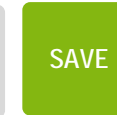
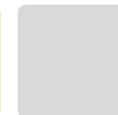
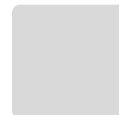
- 2nd site at Rheebock Bricks. 24 shafts built, commissioning underway
- Two additional sites under construction



Highlights from the past year

Habla Zig-Zag kiln International

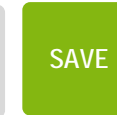
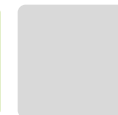
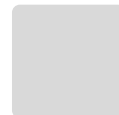
- Construct, Demonstrate & Replicate
- Demonstration phase
- Launch of replication phase



Highlights from the past year

Other technologies implemented as a result of greater EnE awareness

- Perforated products
- Mobile fleet modernisation
- Energy efficient electric motors
- Variable Speed Drives
- Insulation of kiln ducting
- Systems Optimisation, e.g. Fans
- Improved clay preparation



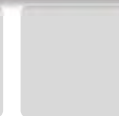
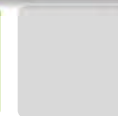
Highlights from the past year

BRICK MAKERS ADOPT ENERGY EFFICIENT NEW / IMPROVED PRACTICES



Development of the Energy Guidelines

- Energy audits
- Benchmarks
- Best Practice



Highlights from the past year

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Development of the Thermal Tool

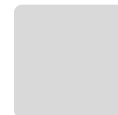
- Measurements
- Specific Energy Consumption
- Heat Losses
- System Optimisation

Energy Management Systems Training

- Policy
- Measures
- Targets
- Energy Plan



EECB
ENERGY EFFICIENT
CLAY BRICK



Highlights from past year

Improved business environment for an energy efficient sector & Building sector adopts Energy efficient clay Bricks



Green Financial Products are accessed by brick producers

- Financial Guidelines commenced

Clay Brick Sector engages Government on EnE policy

- Further engagement on the proposed Carbon Tax

Building Sector made aware of EnE measures in Clay Brick-making

- Presence at the SAAE Conference



EECB
ENERGY EFFICIENT
CLAY BRICK



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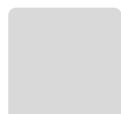
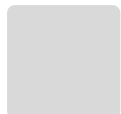
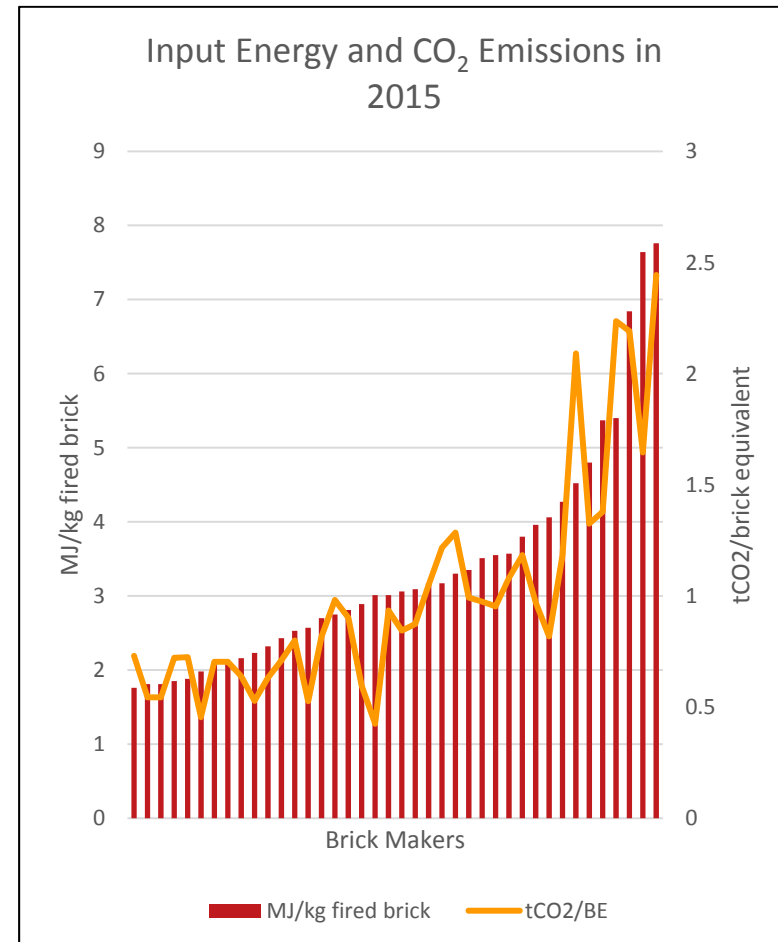
SAVE

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Highlights from the past year

2015 Brick Maker survey – impact of EECB

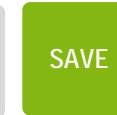
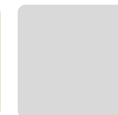
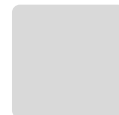
- 40 factories participated
- Weighted avg on production volume: **3.07MJ/Kg**
- Increased awareness of Energy Efficiency
- 83% of companies say that they are implementing EnE measures
- Hope to see more awareness around measurement and self-benchmarking
- Trend? 2013 LCA to 2017



Looking ahead for 2016 / 17

- **ENERGY GUIDELINES & THERMAL TOOL**
 - Dissemination & follow-up

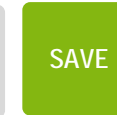
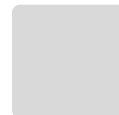
- Demonstration of **ENERGY EFFICIENCY MEASURES**
 - Partnerships and Co-funding
 - Interest / Replicability
 - Dependent on Time Frames



Looking ahead for 2016 / 17

■ FINANCIAL GUIDELINES: Recommended Interventions

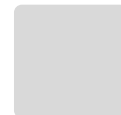
- Develop a strategy to open up finance from banks
- Explore the potential for setting up specialised fund
- Provide training to brick makers around carbon tax
- Undertake wider development of finance related interventions, e.g.:
 - Carbon credits based fund
 - Guarantee fund from international donors to de-risk investment



Looking ahead for 2016 / 17

- **CLAY BRICK SUSTAINABILITY INITIATIVE**
 - Continued development & implementation:
 - CBA/Producers demonstrate sustainability initiatives

- Launch of **ENERGY AWARDS**



Closing thoughts

- Energy efficiency does **not just** come from good equipment, technologies or materials, but **also** from good energy management and good operating and maintenance practices.
- Don't ignore the **small 1 to 2% savings** (generally free/ low cost) as they all accumulate into more substantive savings.
- For you, the **sector**:
 - lower energy costs,
 - improved margins,
 - able to demonstrate contribution to sustainability (marketing)
- For us, the **project**:
 - able to support you,
 - contribute to National Energy Efficiency and lower CO₂ emission initiatives



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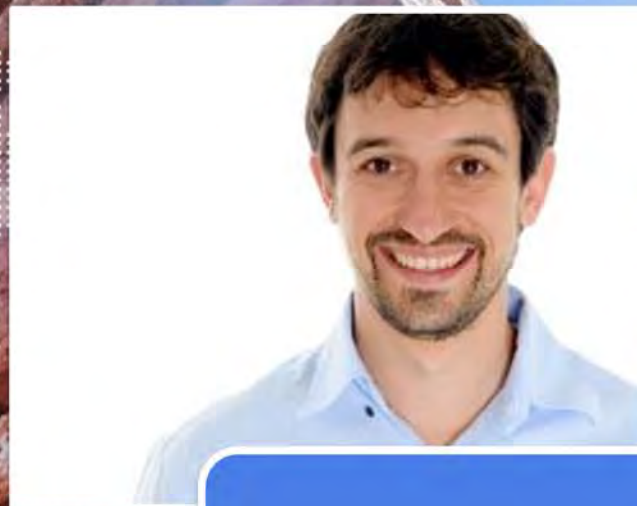
Thank You



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