

# XVI Encontro Anual CEMIG-APIMEC



## The Premier Trees and Networks Management Program

---

Amauri Reigado Costa de Oliveira  
General Manager, Distribution Maintenance (MD)  
June 3, 2011



# The Premiar Program

In March 2009, Cemig created the Integrated Trees and Networks Handling Program (“Premiar”), to help reduce the number of outages caused by trees and branches falling on Cemig’s networks. Premiar works toward the successful coexistence between trees and the electricity network, using the best technical practices and standards for managing and handling urban trees and for planning of aerial networks, while seeking new solutions.

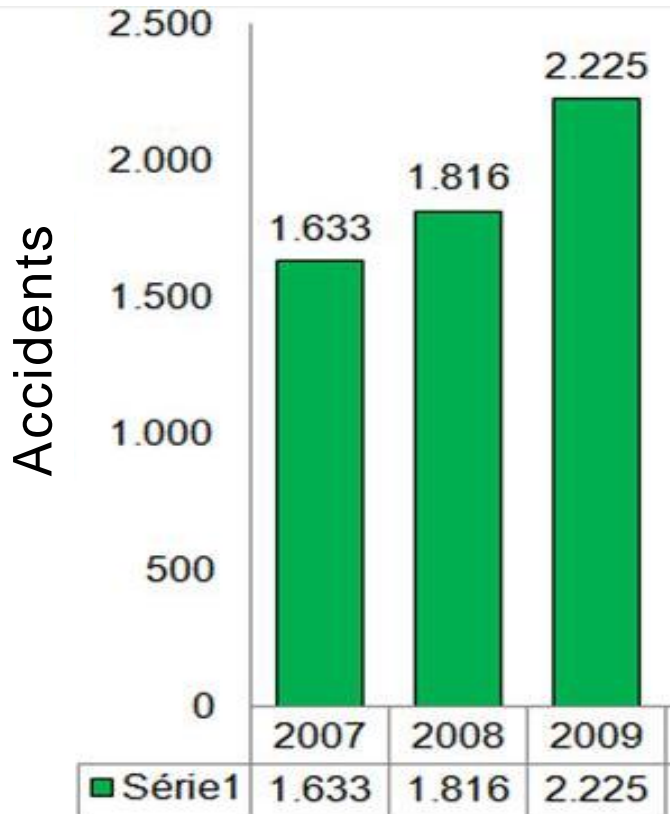


# Objectives

The Program's basic objectives:

- Establish strategy and procedures to guarantee optimum quality in electricity supply in urban areas
- Improve coexistence between electricity network and urban trees
- Create mechanisms to improve management of trees
- Ensure involvement of the community and tree managers in the creation of solutions
- Uphold Cemig's reputation for environmental sustainability

# Accidents caused by trees in Belo Horizonte



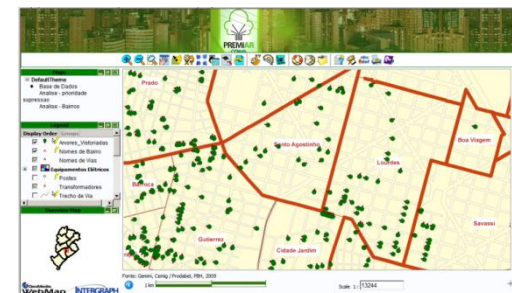


# The Program's Approach

- Monitoring under a Project Management regime
- Adhere to the urban networks management program
- Technical support by skilled tree managers
- Identify and replace risky trees
- Manage vegetation
- Replace electricity networks
- Strong partnership with Belo Horizonte City Hall
- Society involvement (Communication Plan)



- Management using best practices available in project management:
  - Projects In Controlled Environments – Prince2
  - Managing Successful Programs (MSP)
  - Six Sigma
- Focus on results
- Management based on data
- Identification of needs by feed from network – focus on feeds representing the highest risks for the system
- Integration of all teams involved: technicians, tree experts, electricians and pruners



# Skilled Tree Managers

- Agronomists, forest engineers and environmental engineers all coordinated, trained and oriented by Cemig to work with electricity systems
- Knowledge of the behavior of urban trees
- Proposals based on knowledge of trees and handling techniques
- Focus on development of efficiency proposals to improve performance of the electricity system and better co-existence with trees
- Greater alignment with Belo Horizonte City Hall



# Replacement of Trees at Risk

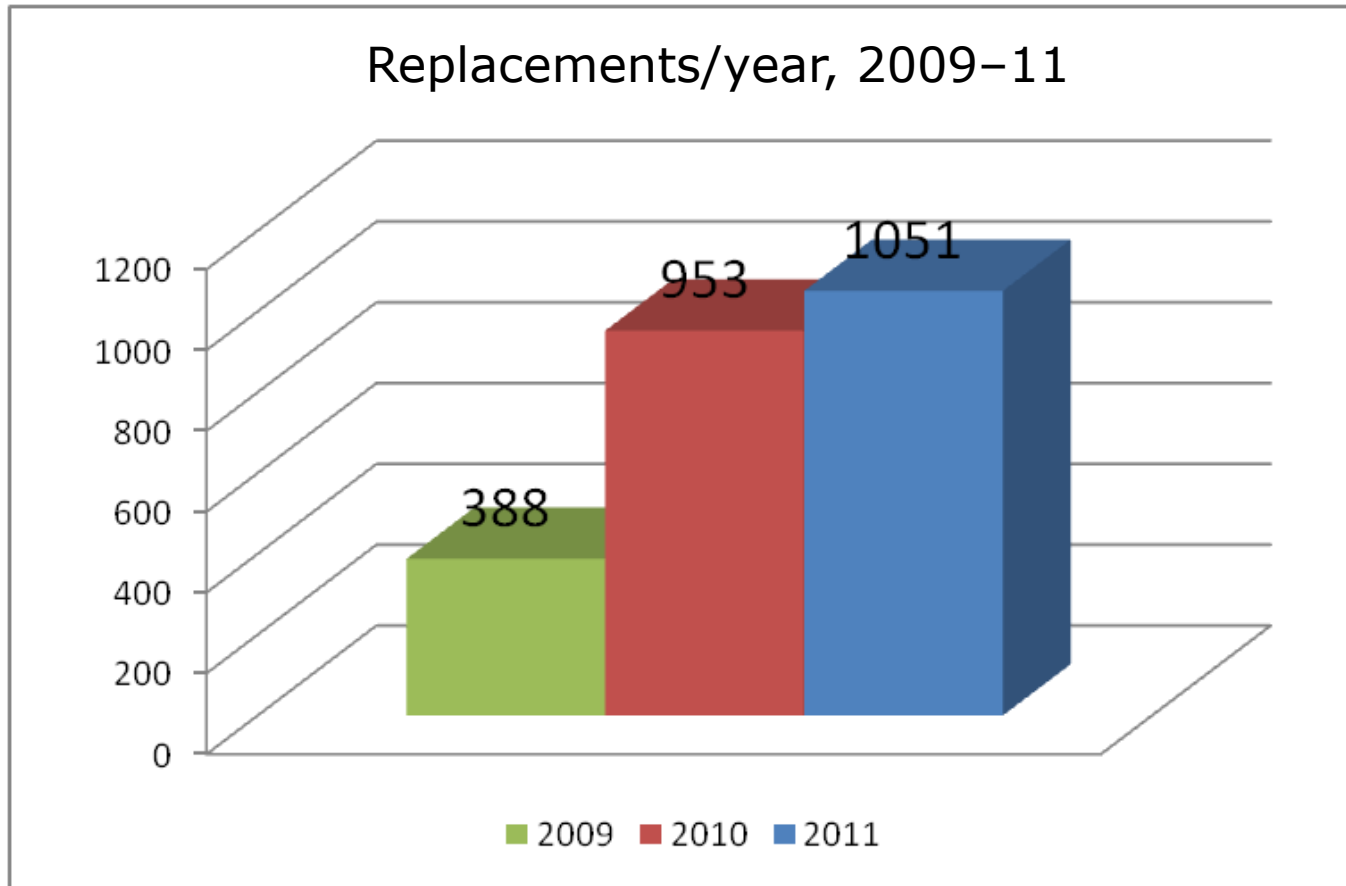
- Joint inspection of trees and network by tree specialists planned in annual cycles
- Assessment of all risky trees, either to the system or to the community, through appraisals to indicate best management for each case. Opinions will be analyzed and validated by City Hall technical staff
- Identification of trees at risk of falling that could damage network and the public
- In 2010, a total of 10,835 trees were found to be at risk and required some handling
- Planting of new trees with high-quality saplings







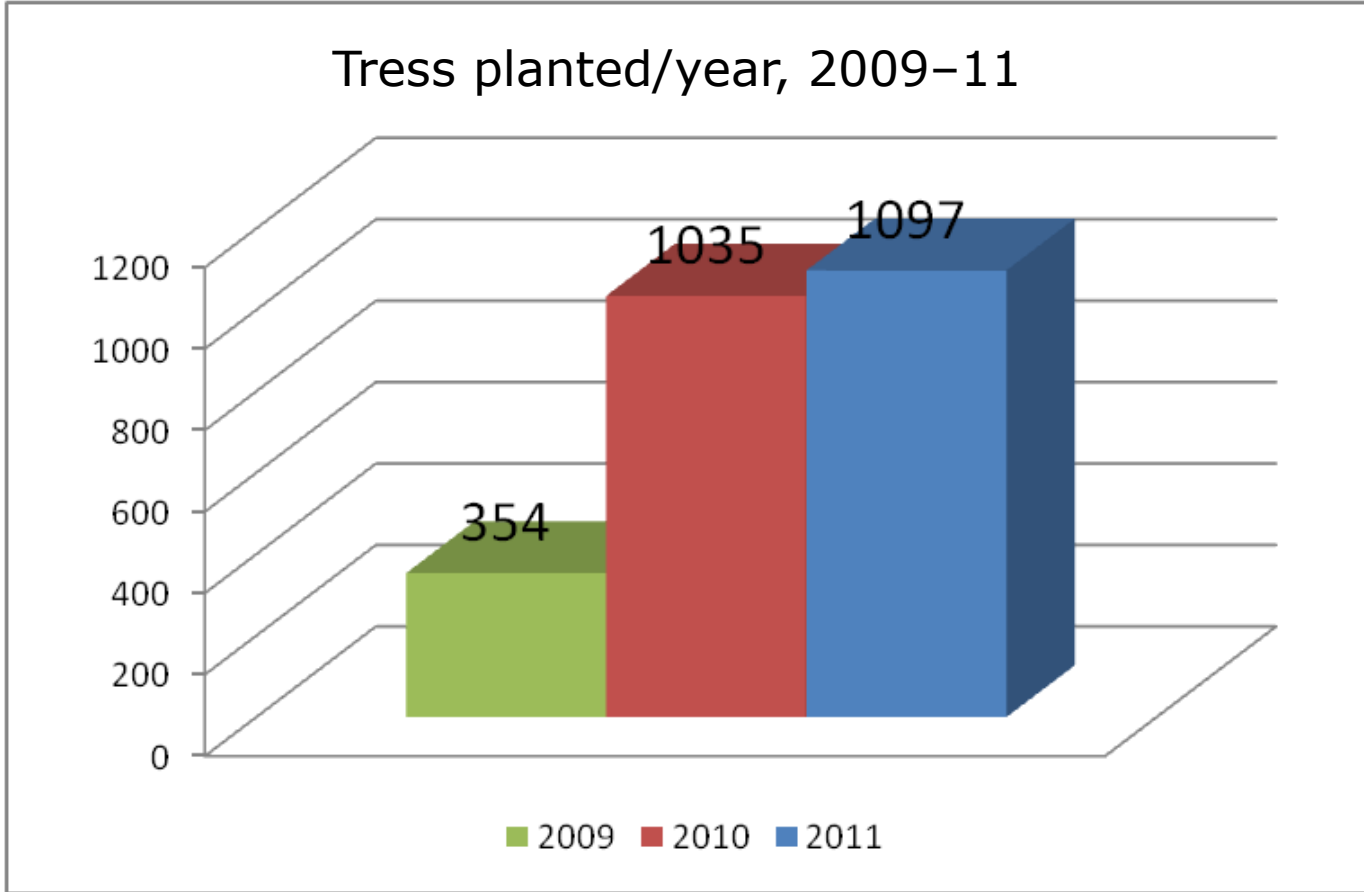
# Replacement of Trees at Risk





# Tree Planting

Tress planted/year, 2009-11





# Handling of Vegetation

- Inspection of tree pruning routes
- Identification of best pruning technique for each type of tree
- Instructions for directional pruning following recommendations of International Society of Arboriculture – ISA, to ensure quality of pruning and tree conservation
- Encourage urban tree conferences to train and develop technicians and involve the community
- Efficiency of the pruning service for effectiveness and network safety

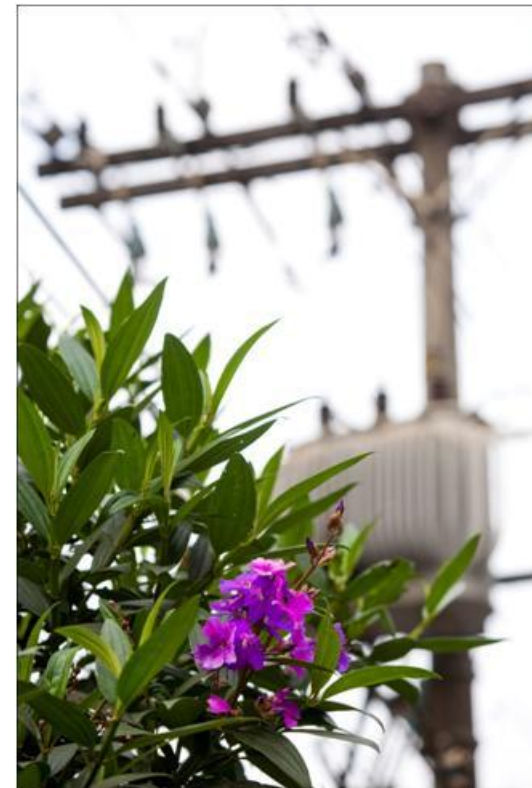


# Replacement of Networks

- Identification of locations for network replacement with insulated or protected networks
- Insulated networks allow for better coexistence with tree tops, reducing need for intervention, especially pruning
- Investment of R\$ 3.6m in Belo Horizonte in 2010 paid for 74 aerial network adaptation works



- Belo Horizonte City Hall
- Consumers
- Cemig employees
- NGOs
- Academic community
- Opinion leaders
- Community leaders



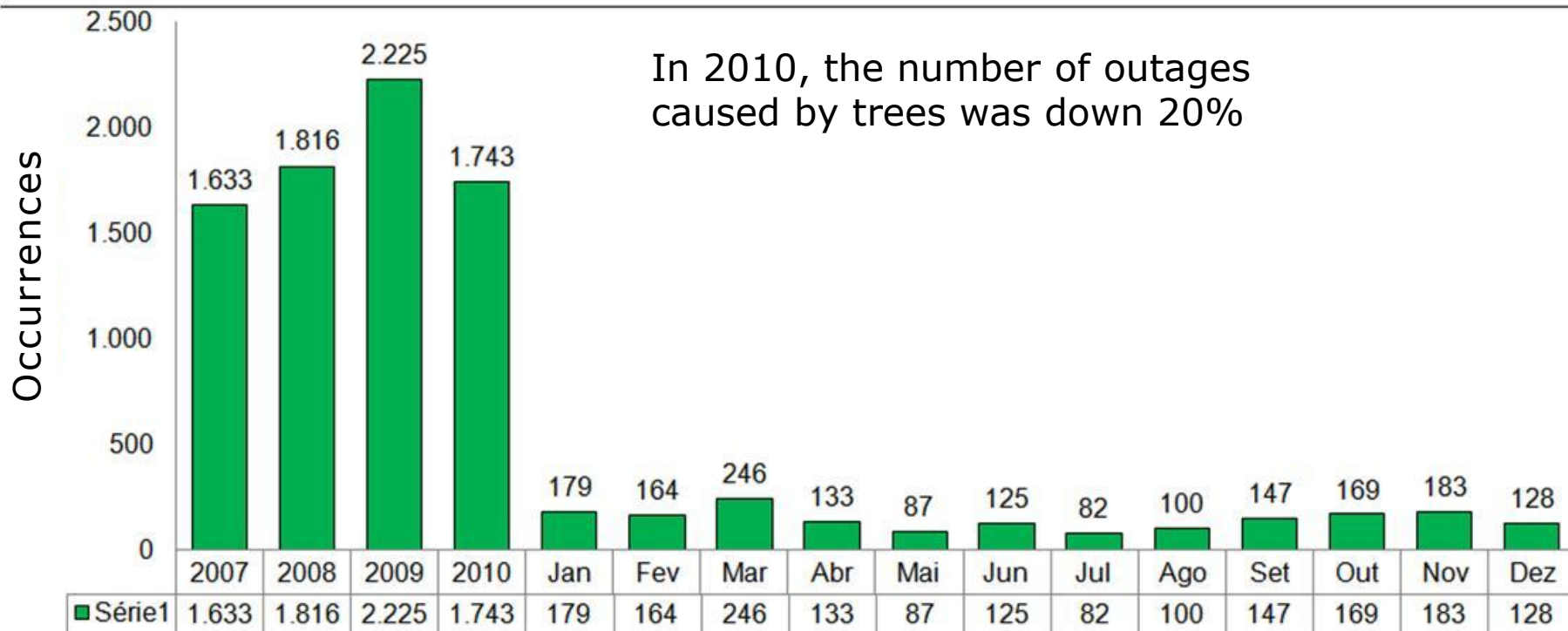
# Community Involvement

- Conduct surveys among the public
- Workshops with district associations, NGOs, local leaders, City Halls and specialists
- Constant contact with the community: distributing bulletins, tree replacement notices and local presence with a program of activities
- Education about caring for new trees
- Website – Premiar Blog
- Open channel for complaints and orientation





## Premiar Program

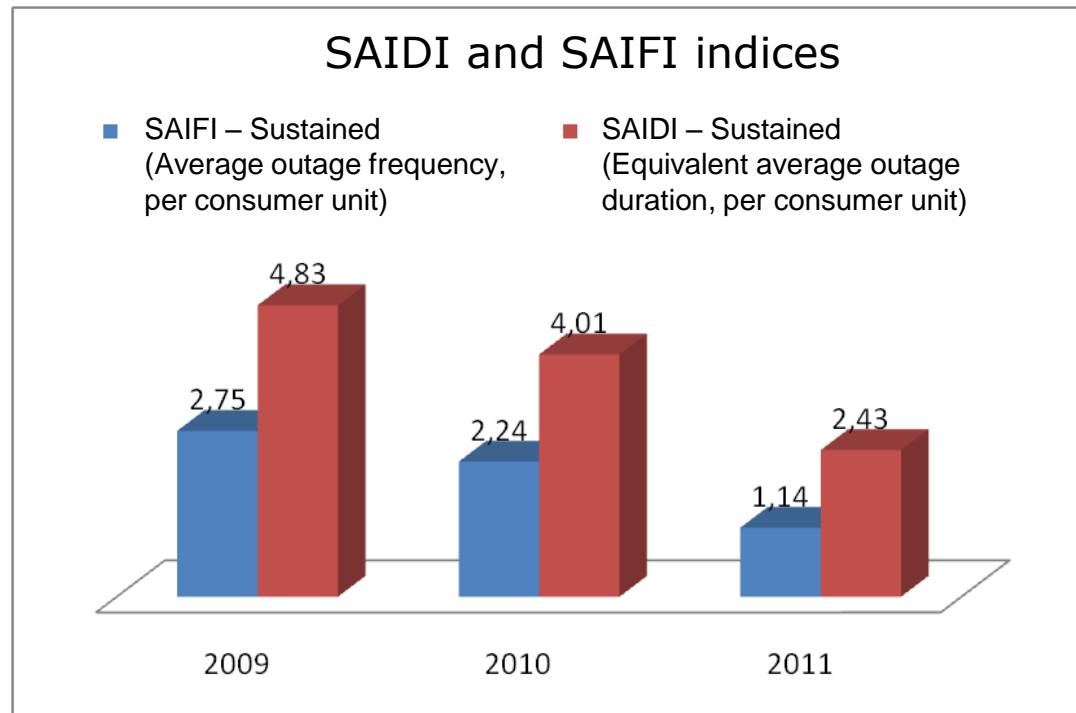


## Better handling of urban trees

- Better handling of arborization with better protection of trees
- Reduction of accidents caused by trees
- Replacement of trees at risk with planting of excellent quality saplings that are better adapted to urban conditions
- Better planning and execution of handling actions
- Support the development of studies to improve processes
- Inventory of arborization in Belo Horizonte, jointly with City Hall

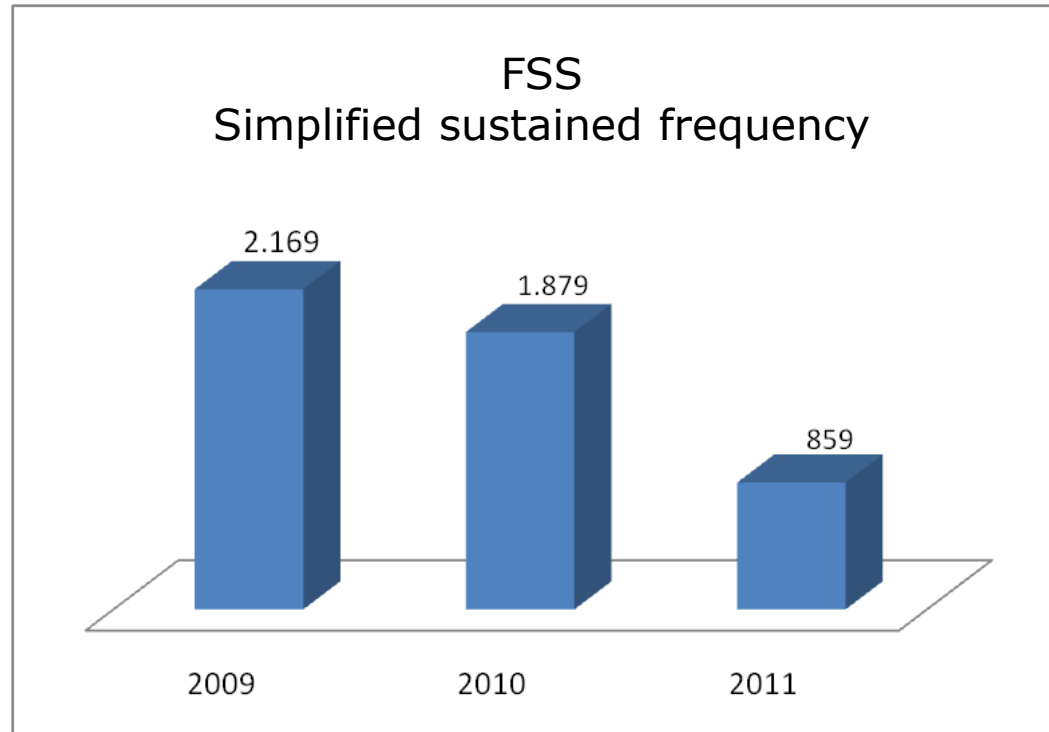


## Indices of network outages caused by trees



The actions of the Premiar Program, complementing the actions of maintenance and expansion, helped improve the Saidi and Saifi indices (outage duration and frequency) in 2010.

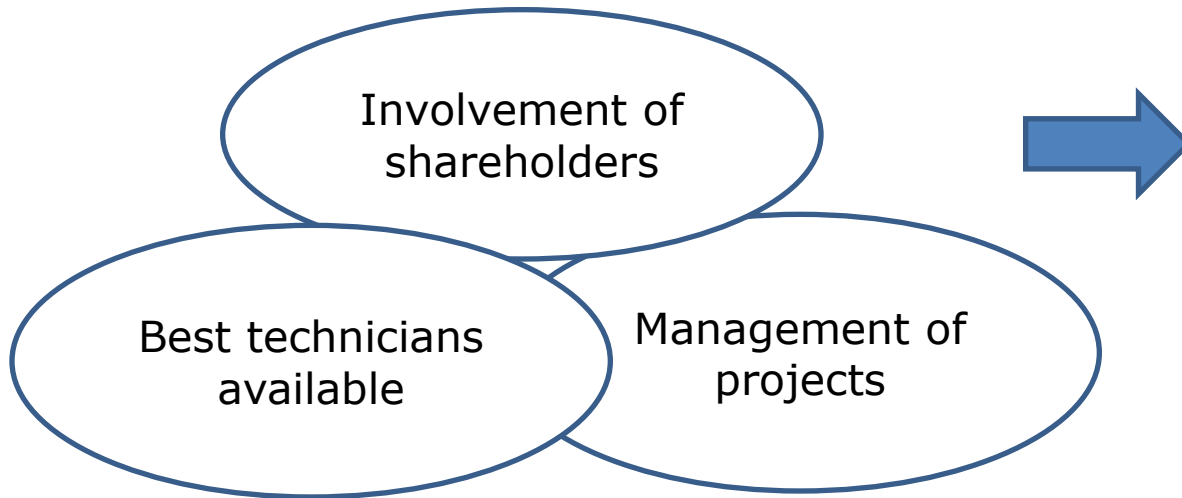
## Index of outages caused by trees



The actions of the Premiar Program, complementing the actions for network maintenance and expansion, have helped improve the FSS index.



## Results



Better operation of the electricity system

Lower cost

Better tree management

Greater involvement of the community



Investor Relations

Telephone: (+55-31) 3506-5024

Fax: (+55-31) 3506-5025

[ri@cemig.com.br](mailto:ri@cemig.com.br)

<http://ri.cemig.com.br>

