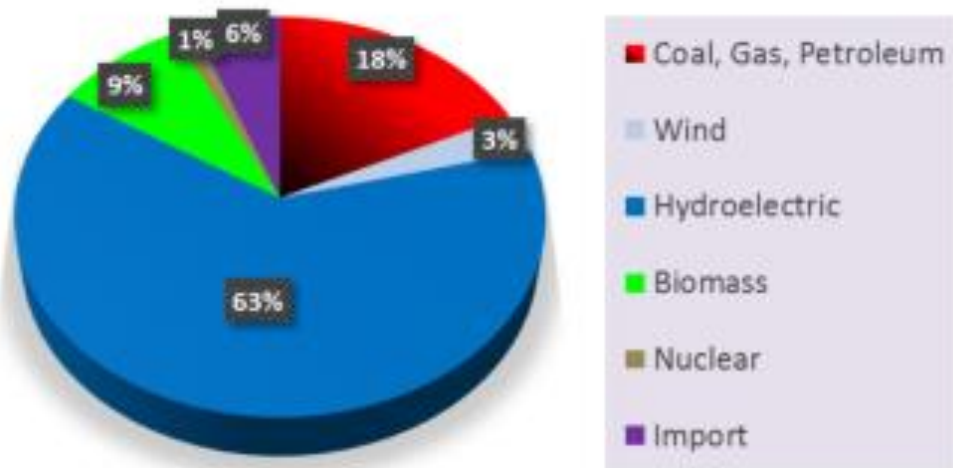


# **Redução do consumo de energia de infraestruturas elétricas**

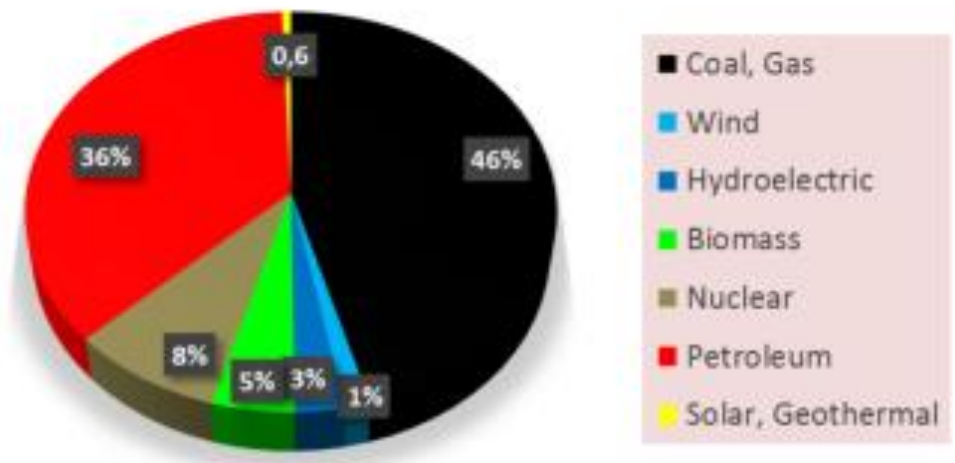
Aluno: João Ferreira  
Orientador: Paulo Maciel

- Data center
  - Infraestrutura de TI
  - Infraestrutura de Resfriamento
  - Infraestrutura Elétrica

a) Brazil Energy Consumption - 2013



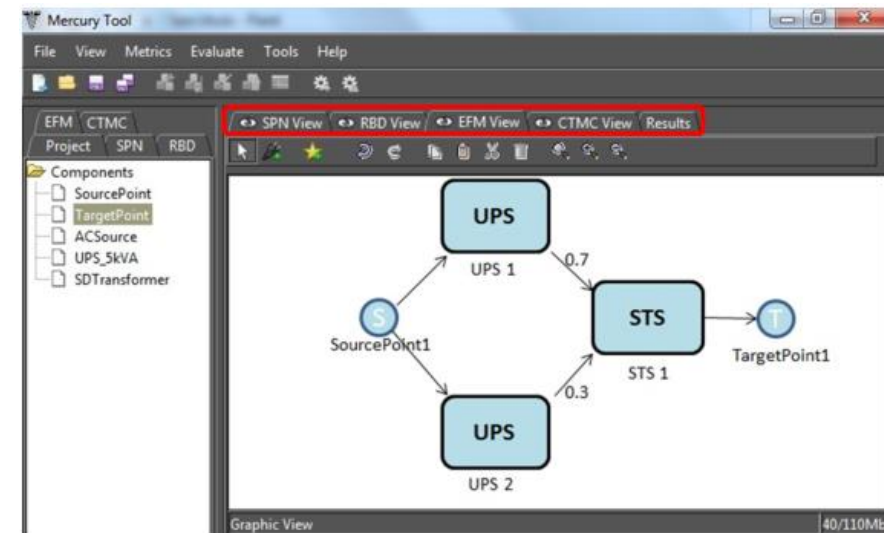
b) US Energy Consumption - 2013



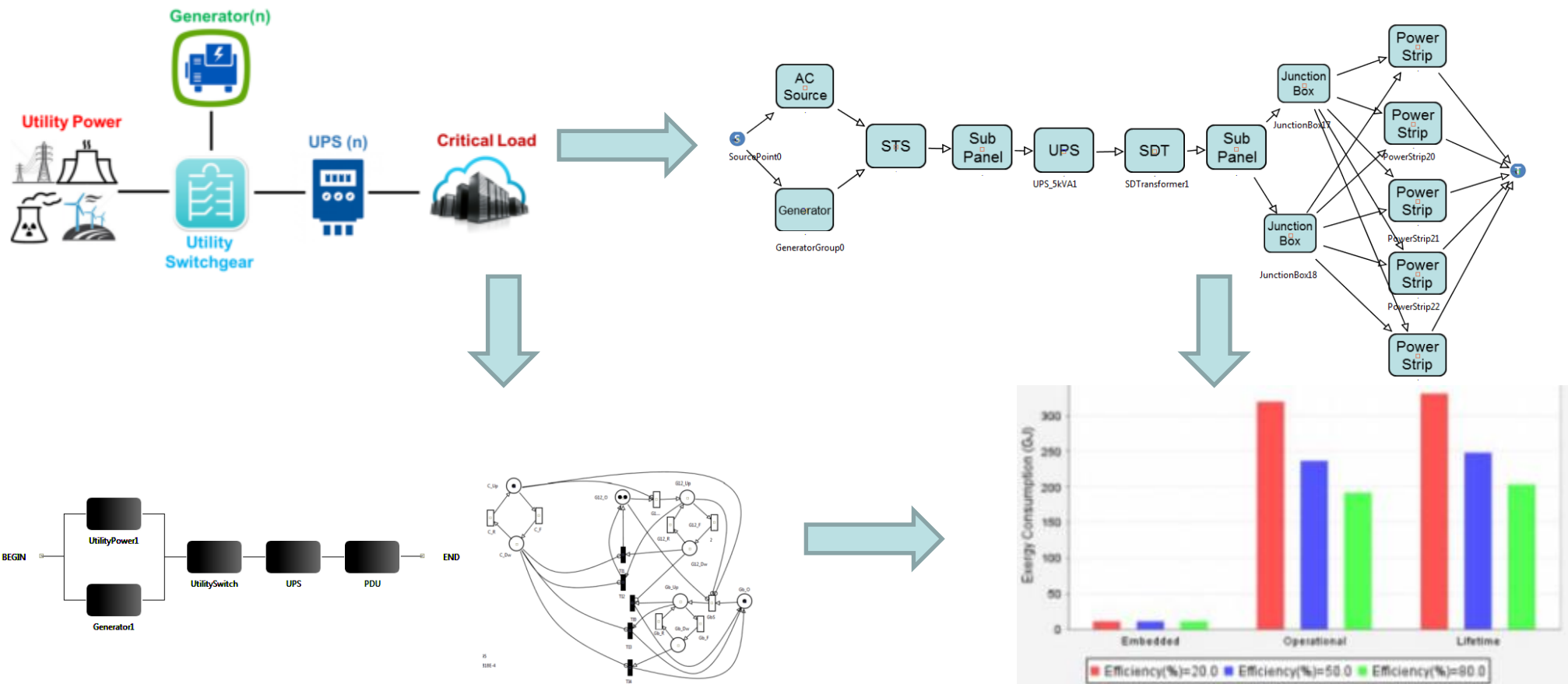
– AMBIENTE SUSTENTÁVEL

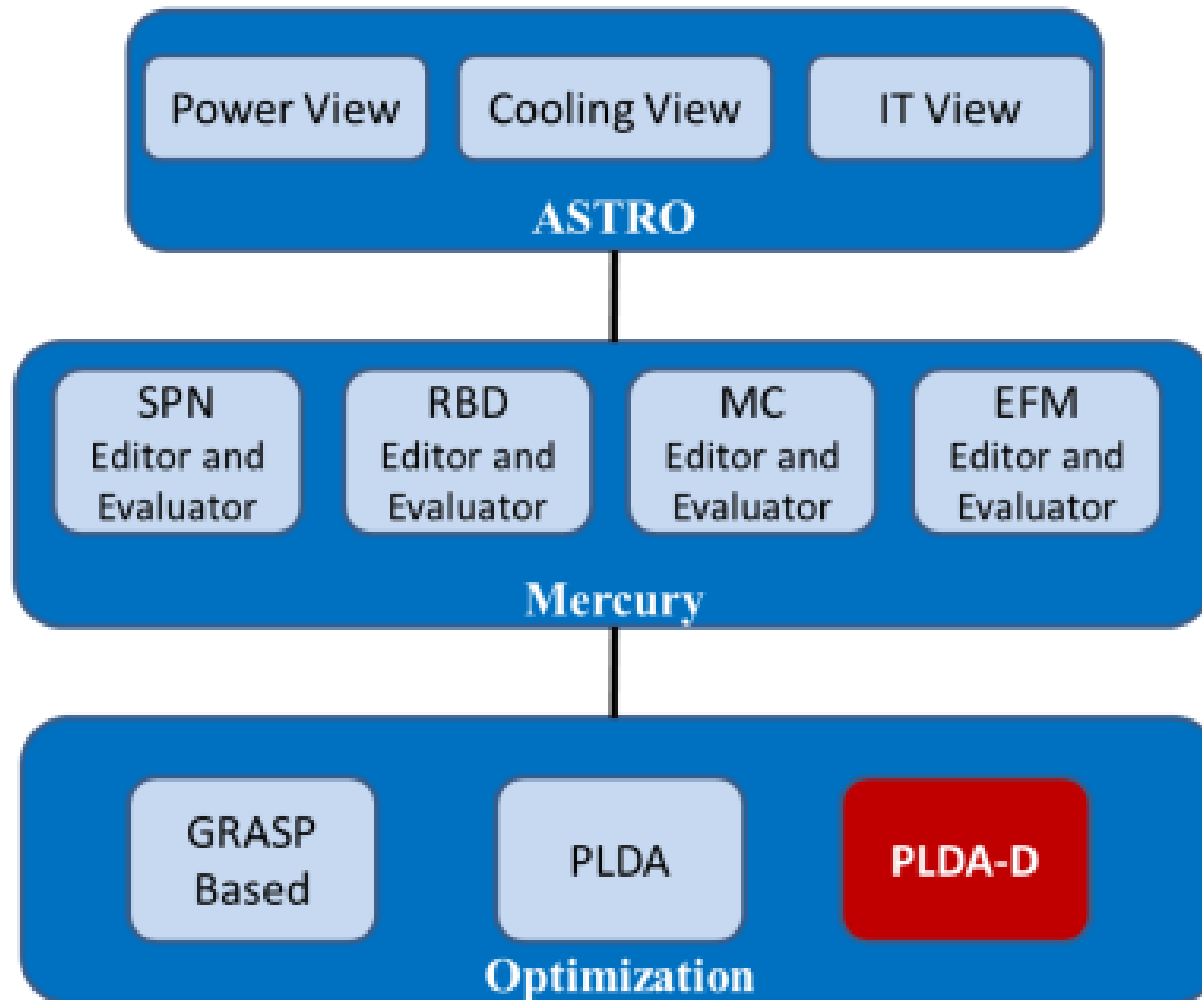
- Como estamos fazendo isso?
  - Utilizamos um conjunto de modelos para a **quantificação integrada** do impacto na **sustentabilidade, custo e confiabilidade** das infra-estruturas de energia e refrigeração do data center.

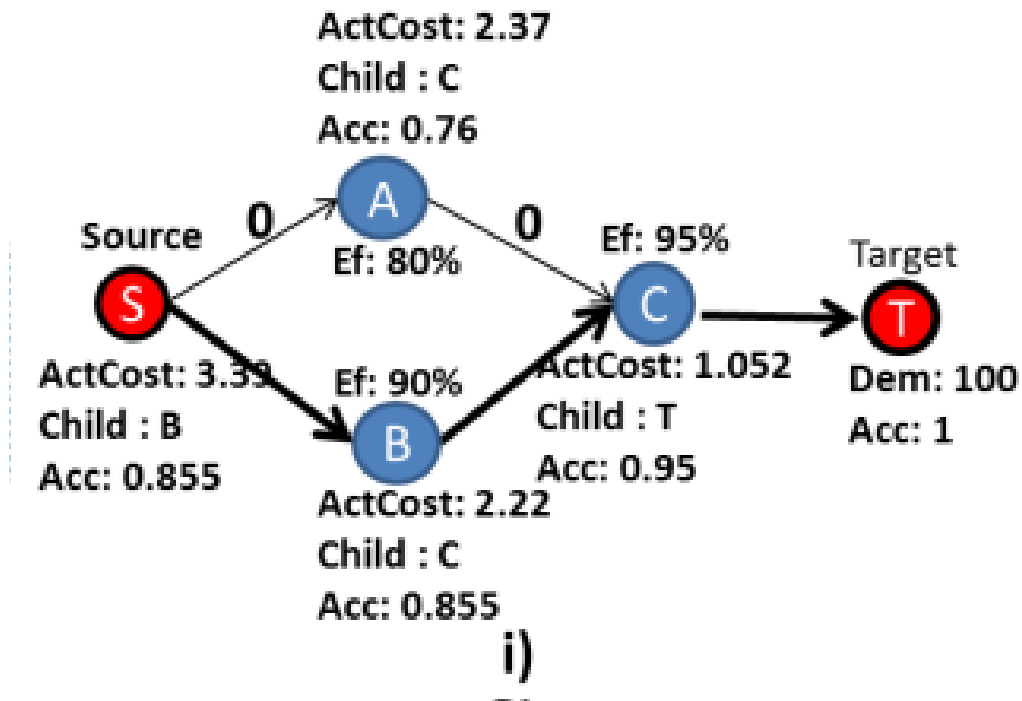
- Com o que?
  - Mercury



- Como estamos fazendo isso?







- **Dependability**

- - Availability
- - Reliability
- - Reliability Importance (RI)
- - Reliability and Cost Importance (RCI)

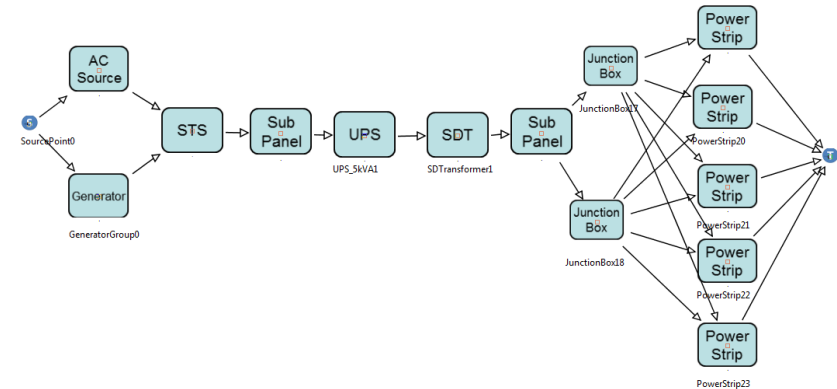
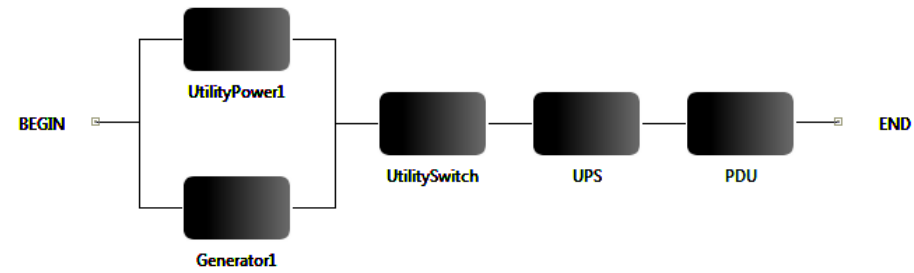
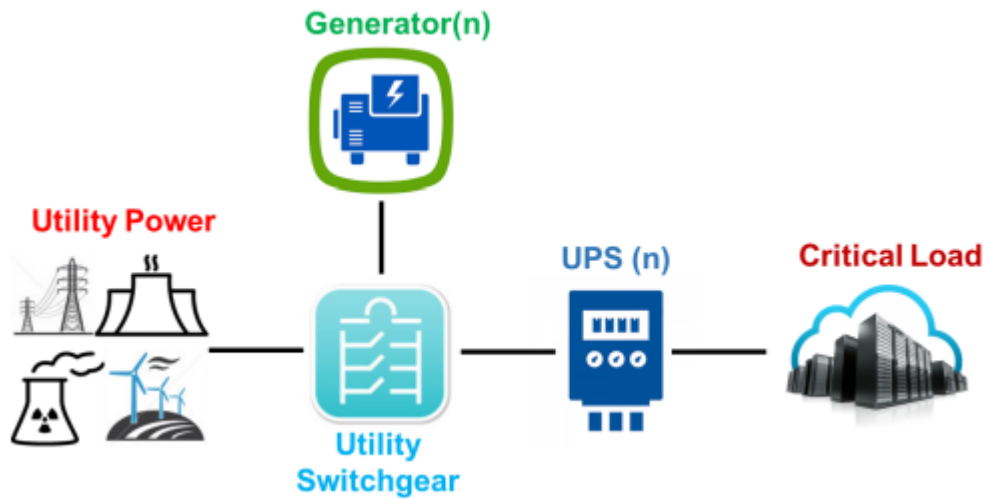
- **Sustainability Impact**

- - Exergy Consumption
- - CO2 Emissions
- - Input Power

- **Cost**

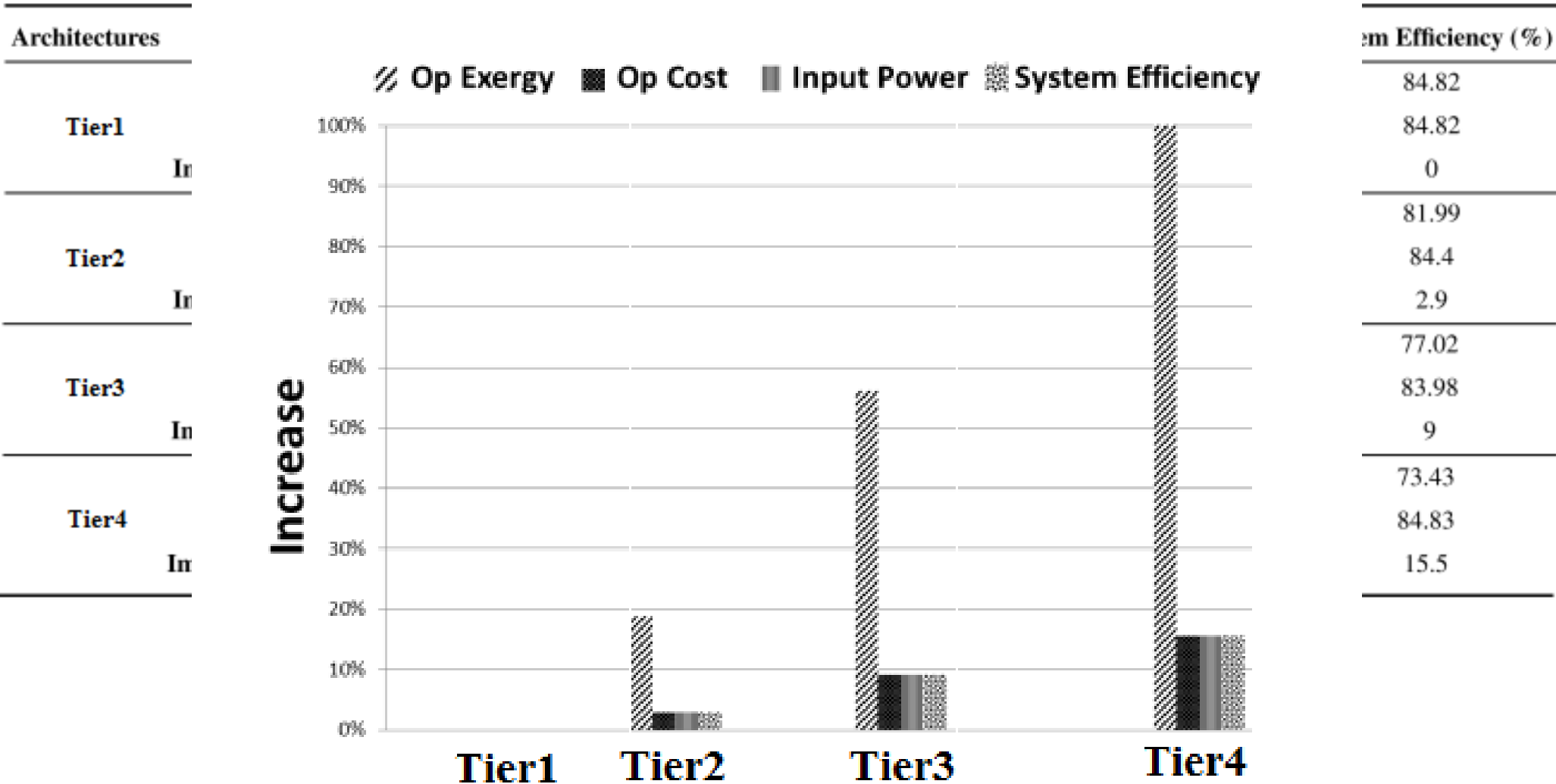
- - Acquisition cost
- - Operational cost

## Exemplo Tier 1





**Figure 11.** Comparison before and after PLDA-**D** execution



- O PLDA-D aloca automaticamente de forma ótima os valores dos pesos em um modelo EFM.
- Para todas as arquiteturas estudadas os resultados com o **PLDA-Depth** foram sempre **melhores** ou **iguais** a arquitetura original.

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