# Article information:

Thermo-economic evaluation for energy retrofitting building ventilation system based on run-around heat recovery system - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0360544222019375>

# Article summary:

1. The building sector plays a significant role in addressing global climate change, as it accounts for 36% of the global total energy consumption and 40% of the energy-related CO2 emission.

2. Exhaust air heat recovery (EAHR) is considered to be the single most important approach of improving the energy efficiency in ventilation systems.

3. Life cycle cost analysis is the most commonly used method for the economic assessment of energy-efficiency measures applied to building retrofitting.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article “Thermo-economic evaluation for energy retrofitting building ventilation system based on run-around heat recovery system” provides an overview of how exhaust air heat recovery (EAHR) can be used to improve energy efficiency in ventilation systems and how life cycle cost analysis can be used to evaluate the economic impact of such retrofitting projects. The article is well written and provides a comprehensive overview of the topic, however there are some potential biases that should be noted.

First, while the article does provide an overview of EAHR and its potential benefits, it does not explore any potential risks or drawbacks associated with this technology. For example, EAHR systems may require additional maintenance or incur higher operating costs than traditional HVAC systems, which could offset any potential savings from increased efficiency. Additionally, while EAHR systems may offer improved efficiency in certain situations, they may not always be suitable for all buildings or climates due to their design limitations.

Second, while the article does provide an overview of life cycle cost analysis as a tool for evaluating retrofitting projects, it does not discuss any other methods that could potentially be used to assess these projects. For example, payback period analysis or net present value calculations could also provide useful insights into whether a particular project would be financially viable over time.

Finally, while the article does provide some examples from previous studies on RAHR systems and their performance, it does not include any data from actual case studies or real-world applications that demonstrate how these technologies have been implemented in practice and what results they have achieved. This information would help readers better understand how effective these technologies can be when applied in real-world scenarios and what challenges they may face during implementation.

In conclusion, this article provides a good overview of EAHR technology and its potential applications in building ventilation systems as well as life cycle cost analysis as a tool for evaluating such projects. However, there are some potential biases that should be noted including lack of discussion about possible risks associated with EAHR technology; lack of discussion about alternative methods for assessing retrofitting projects; and lack of data from actual case studies demonstrating how these technologies have been implemented in practice and what results they have achieved.

# Topics for further research:

* Risks associated with exhaust air heat recovery systems
* Alternative methods for evaluating energy retrofitting projects
* Payback period analysis for energy retrofitting
* Net present value calculations for energy retrofitting
* Real-world applications of exhaust air heat recovery systems
* Challenges of implementing exhaust air heat recovery systems

# Report location:

<https://www.fullpicture.app/item/a90a015772b4f9b5a6143ab50b587405>