**LEMBAR**
**HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW***
**KARYA ILMIAH : *PROSIDING***

| | | | | |
|---|---|---|---|---|
| Judul karya ilmiah (*paper*) | : | Conceptualizing multi actors' collaboration in smart tourism destination | | |
| Jumlah Penulis | : | 3 orang | | |
| Status Pengusul | : | **Maya Damayanti**, Wido Prananing Tyas, W O S J Aswad | | |
| Identitas prosiding | : | a. Judul Prosiding | : | The 3rd International Conference on Smart City Innovation; IOP Conf. Series: Earth and Environmental Science. |
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| | | c. Tahun Terbit/tempat pelaksanaan | : | 2021 |
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|---|---|---|---|
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Semarang, 16 Mei 2023
Reviewer 1,

Prof. Dr. Sunarti, S.T., M.T.
NIP. 196704291994032002
Departemen PWK FT. Undip

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| d.Kelengkapan unsur dan kualitas terbitan/prosiding (30%) | 9 | | 8 |
| **Total = (100%)** | **30** | | **25** |
| **Nilai Pengusul : 60% x 25** | | | **15** |

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Semarang, 16 Mei 2023
Reviewer 2,

Dr. Ars. Anita Ratnasari R. ST, MT
NIP. 197407201998032001
Departemen PWK FT. Undip

**LEMBAR**
**HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW***
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c. Tahun terbit : 2021
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| d.Kelengkapan unsur dan kualitas terbitan/prosiding (30%) | 8 | 8 | 8 |
| **Total = (100%)** | **26** | **25** | **25,5** |
| **Nilai = (60% x25,5)** | | | **15,3** |

Semarang, 24 Mei 2023

Reviewer 1,

Prof. Dr. Sunarti, S.T., M.T.
NIP. 196704291994032002
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# Preface - smart city and its development

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IOP Conference Series: Earth and Environmental Science, Volume 673, The 3rd International Conference on Smart City Innovation 5-6 August 2020, Bali, Indonesia

**Citation** 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **673** 011001

**DOI** 10.1088/1755-1315/673/1/011001



## Abstract

**Gusti Ayu Made Suartika**

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Cities are contingent on the historical forces that have shaped their development. Among these are colonization, industrialization, technology, and information. Today the Smart City has emerged as one possible answer to the emergent problems of urbanization in the 21st century. It joins a multitude of concepts and ideas that address daily life in the post-industrial world of informational capitalism – the sustainable city, the creative city, the green city, and the liveable city – and the Smart City that now seems to resonate with urban administrations and urban designers worldwide. The question is what is it?

Cities are merely reflections of the political economy of their own history. They are acts of imagination that combine use values and exchange values, political elites and poverty, fixed and mobile capital, multi-modal transport systems, and a chessboard of land uses that reflect urban politics, investment strategies, densities and class distinctions, histories, and expectations. There is no 'one size fits all', and cities worldwide contain a vast range of differences. On the basis of capitalist urbanization, most cities grow by consuming themselves – by destroying the old to build the new in an effort to reduce crime, pollution, waste disposal, amenity, security and to increase the rate of commodity circulation to generate wealth.

All historical periods have advanced on three fronts; first, the stockpiling of capital; second, the progression of ideologies that inform development and third, technological advancement. The smart city paradigm falls into the latter category. It is firmly committed to informational technology and informational capital to fuel progress. Given this commitment, the problem is that human interests may be subsumed to technological 'efficiency', forgetting that what is human and what is technical, are not homologous. A central problem, therefore, is how to temper the use of technology with democratic politics and the voice of the people.

Today's social system has been described as 'the Network Society' - the product of informational capitalism. This has entailed massive shifts in power, identity and traditional concepts of place as the virtual world of the space of flows reconfigures the material world in a diversity of forms. In the process, many cities thrive, while others sink in a sea of decay. Development is not democratic, and those cities that become hard-wired fastest also have the economic advantage as well, attracting a new 'creative class' of intellectuals, artists, business people, and professionals who then support a plethora of new urban spaces. As a resolution to the above problems, the smart city is therefore not merely a neutral technological fix. It is infused with problems that need to be interrogated if a more *humane* as opposed to a more *efficient* environment is to emerge.



As we might expect, the smart city is frequently lauded as a panacea for all ills. To test this idea, the third International Conference on Smart City Innovation (ICSCI)-2020 provided space for all forms of critique and debate in order to test the reality of the smart city in theory and practice, and as a viable strategy for future urbanization. In so doing, this conference was conducted to embrace the following four themes and extended topics:

1. Energy & environment:



(a) Sustainable energy storage system for urban built environment;

(b) Urban energy system, security and sustainability

2. Infrastructure:

(a) Sustainable urban mobility

(b) Sustainable urban water management

(c) Sustainable regional development

3. Information and communication technologies/ICT and mobility:

(a) Extending urban healthcare services to rural areas

(b) Internet of things/IoT

4. Quality of life:

(a) Urban housing infrastructure, policy & technology

(b) Live-able urban environment

(c) Urban healthcare services

In contrast to the previous two ICSCI gatherings, the conduct of the 2020 exposition was organized in conjunction with the 13th AUN/SEED-Net Regional Conference on Energy Engineering (RCEneE). This collaboration was completely executed in online mode using Webex. This rationale was decided in response to the ongoing development of the Covid-19 pandemic that started at the end of year 2019 and has had a devastating global impact. Despite regretfully being unable to proceed on the basis of face-to-face encounter, the conference was successfully delivered. It was engaging and well supported, and the Committee would like to express its sincere appreciation to all of those who made this event possible.



*Thank you*.

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# Committee

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# Feasibility analysis of rooftop solar photovoltaic for non-academic building in an educational institution in Malaysia

M F M Zublie[1,2,3], M Hasanuzzaman[1] and N A Rahim[1]



IOP Conference Series: Earth and Environmental Science, Volume 673, The 3rd International Conference on Smart City Innovation 5-6 August 2020, Bali, Indonesia

**Citation** M F M Zublie *et al* 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **673** 012005

**DOI** 10.1088/1755-1315/673/1/012005

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## Abstract

An educational institution is one of the sectors that consume a high amount of energy. An identify the energy consumption gives information to forecast the energy saving. The research aims to utilize rooftop solar photovoltaic (PV) at non-academic buildings in Malaysia's educational institution. A detailed energy audit has been conducted at Politeknik Sultan Azlan Shah (PSAS) involving three non-academic buildings to identify the buildings' energy usage. The three different building involved is the Islamic Centre (Masjid), Sports Centre, and Multipurpose Hall. The energy audit analysis is divided

into four end-load groups comprising lighting, fans, air conditioning, and other equipment to identify each type of load's energy consumption. Which equipment consumes the highest amount of energy in non-academic buildings in PSAS is determine. The results show that the highest energy consumption at the Islamic Centre and Multipurpose Hall is an air conditioner for a while Sports Centre is lighting equipment. Annual power generation and energy bill savings are calculated based on rooftop solar PV installation for self-consumption. From the feasibility analysis, the forecast of energy-saving for at-least 5% per year has been estimated. It significantly reduces the amount of carbon emission release to the environment.

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# Biomass Energy Potential for Domestic Combustion in Myanmar: Characterization of Biomass Fuel Pellets

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IOP Conference Series: Earth and Environmental Science, Volume 673, The 3rd International Conference on Smart City Innovation 5-6 August 2020, Bali, Indonesia

**Citation** Nwe Nwe Win *et al* 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **673** 012007

**DOI** 10.1088/1755-1315/673/1/012007

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## Abstract

Biomass is the largest contributing energy source in Myanmar due to low cost and environmental consequences. Myanmar annually produces 5.77 million ton of rice husk on 26.21 million ton of paddy rice production and 114,975 cubic ton of wood left in the forest on annually 365,000 ton of wood logs. Myanmar still needs more energy consumption to develop the agricultural economy and biomass energy in the future of the country although electricity supply is expected to increase to 55 percent in 2021-2022 FY. In this work, the chemical composition and energy composition of rice husk and assorted wood were determined. And then, the physicomechanical properties of rice husk pellets without doing size reduction but assorted wood pellets with size reduction were analyzed and compared

these results with ISO 17225-6 and ISO 17225-2 standards. The assorted wood lignin content was higher than of rice husk. The ash content of rice husk was higher than that of assorted wood due to large amount of ash forming compounds such as silicon dioxide and potassium oxide in rice husk. The bulk density, net calorific value, and mechanical durability of assorted wood pellets were higher than that of rice husk pellets due to the larger amount of lignin in assorted wood. The physicomechanical properties of produced pellets were complied with ISO standards.

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# Numerical simulation of tides for the assessment of tidal in-stream energy in selected sites in the Philippines

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IOP Conference Series: Earth and Environmental Science, Volume 673, The 3rd International Conference on Smart City Innovation 5-6 August 2020, Bali, Indonesia

**Citation** I B O Villalba *et al* 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **673** 012017

**DOI** 10.1088/1755-1315/673/1/012017

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## Abstract

The Philippines has an untapped potential of ocean renewable energy, and one of the appropriate tidal energy converters for the country is in-stream tidal energy. The archipelagic nature of the country along with its position between the Pacific Ocean and West Philippine Sea results in high tidal currents due to the narrow transitions between the two large bodies of water. This study aims to assess the potential in-stream energy in the Visayas-Mindanao region using numerical simulation. Using the Advanced Circulation Model (ADCIRC) in the modelling of tides, four (4) locations in the study area with the highest simulated depth-averaged current velocities are identified, namely, Liloan Port, Hilutungan Channel, Surigao Strait and Banug Strait. Among the selected stations, Banug Strait between the Islands of Bayagnan and Awasan produces the highest energy density of 253.2 kW-h/m$^2$. Using an 18-

m diameter turbine, it is estimated to have a monthly energy output of 64.4 MW-h, which is estimated to support 260 households on average. The annual energy output of the said 18-m diameter turbine is 773.3 MW-h.

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# Designing a test rig for ultimate load test of small horizontal axis wind turbine rotor blades

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Published under licence by IOP Publishing Ltd

IOP Conference Series: Earth and Environmental Science, Volume 673, The 3rd International Conference on Smart City Innovation 5-6 August 2020, Bali, Indonesia

**Citation** T T Tien *et al* 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **673** 012002

**DOI** 10.1088/1755-1315/673/1/012002

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## Abstract

This paper presents a design of a test rig for structural static load testing of small horizontal wind turbine blades. It is a next step after the success of the DeVie project, a join-research project to boost the wind energy knowhow between Germany and Vietnam. According to the IEC-61400-23 standard for full scale ultimate load test of rotor blades, and based on existing facilities of HCMUT, especially the aerospace engineering lab. and the engineering mechanics lab., we propose a prototype of a test-rig

for ultimate load test of rotor blades. And a rotor blade of 4 meters in length, manufactured by China, is used in case study of our structural static-load test-rig. The obtained results will be compared with the reverse engineering this rotor blade with QBlade/FAST in the same blade loading.