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Review of the implementation of the programme of work 2018-2019:
Sustainable urban development

Executive Summary and Policy Recommendations of the
Smart Sustainable Cities Profile – Voznesensk, Ukraine

Note by the secretariat

Summary

At its seventy-eighth session (ECE/HBP/190) in November 2016, the Committee on Housing and Land Management received a request to prepare the Smart Sustainable City Profile for the town of Voznesensk (Ukraine) from the Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine. The preparation of the study started in December 2017; the study was completed in January 2019.

The smart sustainable cities profile of the city of Voznesensk, Ukraine, has been prepared by the secretariat of the ECE Committee on Housing and Land Management together with the Organization for International Economic Relations (OiER).

This Note includes Executive Summary and Policy Recommendations of the Smart Sustainable Cities Profile – Voznesensk.

The Committee is invited to endorse the Executive Summary and the Policy Recommendations and agree to publish the city profile in English as an official electronic publication.
I. Executive Summary

A. About the study

1. The purpose of the study “Smart Sustainable Cities Profile - Voznesensk, Ukraine” was to analyse the city of Voznesensk by using the Key Performance Indicators (KPIs) for Smart Sustainable Cities and support the municipality in setting priorities for action. The KPIs have been developed by the ECE with the International Telecommunication Union (ITU) and other UN bodies, as well as other partners as part of the global United for Smart Sustainable Cities (U4SSC) initiative.

2. The Committee on Housing and Land Management received a request from the Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine in 2016 at its seventy-eighth session (ECE/HBP/190) to prepare the Smart Sustainable City Profile for the town of Voznesensk (Ukraine). The ECE secretariat representatives together with experts from the United Nations Development Programme office in Ukraine and a team of international and local experts developed this Profile for Voznesensk on the basis of a research mission and stakeholders’ consultation which took place in Kyiv and Voznesensk in December 2017. The study was finalised in January 2019.

3. Development of the Smart Sustainable Cities Profile was supported by the joint ECE/UN-Habitat UNDA Tenth tranche project “Evidence-based policies for sustainable housing and urban development in selected countries with economies in transition” where the study was a pilot project on evidence-based policy making at local level.

4. This summary provides an overview of the city’s situation and the analysis of its economic, environmental and socio-cultural indicators and provides with policy recommendations.

B. Background

5. Voznesensk is a medium-sized city in Ukraine, located in the Mykolaiv Oblast, and is the administrative centre of the Voznesensk district. It is a city of oblast significance, meaning it is designated as a separate district within its region. The city has is an important part of the historical heritage of Ukraine and has a good climate which favours agriculture and tourism. Recently, the city became popular for sports such as motorball. Furthermore, Voznesensk has invested in culture and recreation.

6. The economy of the city is mainly based on light industry and food processing. In the light industry sector, the most relevant areas are leather and leather goods, and manufacture of outerwear, footwear and furniture. In food processing, the most relevant areas are meat products, bakery and confectionery.

C. Urban development situation

7. Over the past two decades, Ukraine has experienced a steady population decline due to an aging population, a decline in fertility rates and emigration. As people leave rural areas, 80% of Ukrainian towns and medium sized-cities are also losing their population to larger cities. Further, the eastern and southern regions are highly urbanized but have shown slower urbanization rates in the last two decades, while the historically rural Western region currently shows faster urbanization rates.

8. In 2014 Ukraine started a decentralization process which involved important modifications to its governance system. The most important modifications are:
   (a) A re-drawing of local administrative units (territorial-administrative reform) through the establishment of Amalgamated Territorial Communities (ATC) or ‘hromada’;
(b) A redistribution of roles and responsibilities between levels of local government and a decentralized state administration, leaving the latter with a mostly regulatory and oversight role;

(c) Broader fiscal and financial management powers given to local government.

9. This process of administrative restructuring has been accompanied by fiscal decentralization. This means that villages, towns and cities can unite communal properties and budget funds for joint projects or co-finance communal enterprises, organizations and institutions, creating appropriate bodies and services to do so. To support the decentralization process, Article 140 of the constitution gives local self-government the right to independently solve issues of local significance. This procedure is carried out by the local community directly, through local self-government bodies and their executive committees.

D. Analysis of the key performance indicators (KPIs)

1. Economy

10. To conduct the assessment of the city of Voznesensk, this study used the Key Performance Indicators (KPIs) for Smart Sustainable Cities, developed under the initiative United for Smart Sustainable Cities (U4SSC). The data, dating to 2016-2017, was collected by the municipality and verified by a third-party auditor. The economy section of the KPIs includes 43 indicators grouped into three sub-dimensions: ICT, productivity and infrastructure. The city of Voznesensk reported on 36 indicators under this category.

11. In terms of Information and Communication Technology (ICT), the city is performing fairly well. Inhabitants generally have good internet connections and Wi-Fi hotspots are available. A citizens’ transport card system has been implemented, and a Geospatial Information Systems (GIS) city map has been developed, which will need to be regularly updated. Other services like drainage, electricity and water are not monitored by ICT and this currently does not represent a priority for the city. However, Voznesensk should continue to implement its services through digital platforms, and, due to the high cost of electricity, should consider using ICTs to monitor, manage and reduce electricity usage in the context of other energy efficiency initiatives.

12. Productivity needs improvement, as unemployment is fairly high and employment conditions can be unstable. Despite the current strategy of increasing tourism, tourism employment is still very low. In recent years, the city has seen the loss of larger companies because the primary sector was unable to provide raw materials. For example, a meat plant closed because the rural economy could not provide necessary cattle. Currently, small and medium-sized enterprises constitute the bulk of the local economy and need to be appropriately sustained and regulated.

13. Another economic issue for the city of Voznesensk is high public spending. In fact, while the decentralization process brought enormous advantages to local authorities in terms of budget autonomy and decision-making, local administrations like Voznesensk have to cover a wide range of expenses to provide adequate services to residents.

14. The city infrastructure also needs improvement. Voznesensk suffers from water losses, high electricity costs, poor solid waste treatment and sewage coverage, and an ageing building stock which requires retrofitting. Transport infrastructure works well in a compact city like Voznesensk. However, some road improvement is needed, especially if tourism is to become a primary source of income. Finally, introducing energy efficiency measures, especially in buildings, could offset heating, cooling and lighting costs and improve comfort.

2. Environment

15. The environment pillar of the KPIs includes 17 indicators grouped into two sub-dimensions: environment and energy. Voznesensk reported on 13 of these KPIs.

16. The city is very rich in good-quality water, however 25% of the population is not connected to the public system and use their own, sometimes illegal, wells. When such a
significant percentage of the population is not connected to the sewage system, hygiene issues may be more widespread, especially if cesspits are not properly maintained and cleaned. Furthermore, the wastewater treatment plant is situated outside the city and at a high elevation, thus having an impact on the cost of energy. Despite the fact that solid waste collection is properly done, there are issues with solid waste disposal as existing landfill is almost full and attempts to establish separate waste collection have failed. The municipality is not able to provide incentives, so it is implementing a recycling awareness and educational programme in schools.

17. Noise and electromagnetic field exposure do not seem to be significant issues for the city. However, the whole region suffers a lack of natural capital and biodiversity. Due to intensive agriculture, forests and other green areas are relatively scarce. Voznesensk has several parks but these are further than 300m away from home for 75% of the urban population.

18. As previously mentioned, energy costs remain a major issue for the city and its citizens, in particular the pumping of wastewater to the sewage plant and water pumping at the fresh water plant, as well as heating costs for schools, hospitals and households. The city is not performing well in regard to energy. Currently, the city does not use renewable energy sources but only fossil fuels and nuclear power. Investment in the production of renewable energy need to be considered, especially considering the city’s climate, agricultural landscape and current high energy costs.

3. Society and culture

19. In total, there are 29 indicators within the Society and Culture Dimension, grouped into two sub-dimensions: Education, Health and Culture; and Safety, Housing and Social Inclusion. Voznesensk has reported on 26 socio-cultural indicators.

20. The city is performing well in education, in particular in the student internet access which is 100% along with high student enrolment and literacy rates. The number of people with higher education qualifications is low, however, compared to the national average.

21. In the health category, the city has two important issues. The local hospital lacks equipment while having to serve the population of Voznesensk and surrounding districts (without receiving support from their budgets). The other issue is the cost of individual care. If a person needs special treatment, people are sent to the regional hospital or private clinic. If they cannot afford to pay, the city is responsible for its coverage. Furthermore, the city provides medication for disabled and chronically diseased people without reimbursement from the national budget. On the plus side, all citizens have electronic health records thanks to a “citizens card”. On culture, the city performs very well and great importance is given to cultural activities and institutions.

22. Housing is a major issue for Voznesensk - after energy costs, people reported high housing costs. Housing accounts for an average of 22% of household income, and the quality of the housing stock is poor and hard to maintain. Despite no one living in informal settlements, poverty conditions or disaster-prone areas, citizens feel very discouraged by the city’s economic situation and many migrate either to bigger cities, or abroad.

23. The city is reasonably safe in terms of violent crime and traffic accidents, but citizens are concerned about robbery, drug dealing, and wild dogs, which could become dangerous and carry disease.

4. Financial framework

24. Voznesensk’s city budget for 2017 was 400 million hryvnias (13 million USD), composed of general and special funds. Income tax accounted for 60% of the total budget, while the remaining 40% is derived from regional and state budgets. Overall, the local budget is very tight, and with decentralization laws the municipality is under increased pressure to spend its budget prudently. As far as maintenance is concerned, repair and modernization funds are very limited, meaning that only small improvements can be made annually. Additional taxes or borrowing funds (other than potentially for the solar plant) are not being considered. The city also receives international support from donors and national support.
from the nearby nuclear plant, but these funds are to support development projects. Infrastructure upgrades have begun, but funding is definitely an issue.

II. Policy recommendations

1. Economy

Promote Energy Efficiency

25. Energy use has a large impact on the city’s budget. Therefore, projects which support increasing energy efficiency and thereby reducing GHG emissions, should be a priority.

26. To improve energy efficiency of buildings, it is recommended to:

   (a) Increase/upgrade insulation in the current building stock. Building envelope insulation is the most practical and cost-effective way to make houses energy efficient, increase indoor comfort and save up to 80% in heating and cooling losses. It is therefore advisable to support insulation upgrades with fiscal incentives and awareness programmes.

   (b) Install higher efficiency heating systems. Fuel price and environmental concerns drive the modernization of old heating systems. Modern, highly efficient, heating systems lead not only to cost savings but can also dramatically reduce the yearly total emission of pollutants.

   (c) Install higher efficiency lighting.

27. To improve lighting efficiency in streets, it is recommended to:

   (a) Promote the use of new technologies with high luminous efficiency (high luminous flux per unit of electric power used);

   (b) Apply smart lighting, such as sensors, reducing lighting at different times of day.

28. To improve energy efficiency in industry and transport, it is recommended to

   (a) Develop energy efficiency rebate programmes. Cash rebates for customers planning to install new, energy efficient information technology equipment or cooling systems could be provided.

   (b) Develop mandatory city energy efficiency policies. To create an enabling framework, a good system of regulations and policies are needed. With decentralization, many formerly national decisions are now taken by municipalities. Therefore, Voznesensk city council can adopt energy efficiency and renewable energy policies within its territory.

29. To promote sustainability of the energy sector, it is recommended to:

   (a) Promote the use of biomass in the energy production. Since energy costs are a major issue for the city, energy cost reduction is a priority. Energy from biomass seems the obvious solution, since it offers many low-tech and low maintenance options. Alternative energy sources could include:

      (i) Plant biomass. Due to the agricultural setting of Voznesensk, there are many options, such as burning plants in controlled vessels, processing oil seeds or starch-plants for ethanol or oil-based bio-fuels, and anaerobic fermentation to produce biogas. All options should be considered, taking into account which species can be produced at low cost and in co-operation with surrounding land owners, and which technology is most affordable and low-maintenance;

      (ii) Sewage sludge. Sewage sludge, which is a product of wastewater treatment, can be used to produce biogas, as an energy source to run the water treatment plant pumps.
Redevelop local industry based on the use of local resources, promote innovation

30. **Develop an industrial/business strategy based on the new rural economy.** Consider developing new industries based on locally available raw materials. The closure of large employers in the city has had a negative impact on its economic base. Much of this was due to changes in the surrounding rural economy so that agricultural raw materials were no longer available. As a centre for the region, Voznesensk should review the surrounding rural economy and develop strategies that integrate with and support the economy of surrounding rural areas. The city should also consider developing new industries based on locally available raw materials such as sand and granite.

31. **Implement agriculture-based solutions:** Compared with similar cities, Voznesensk lacks innovation, and there are very few SMEs offering new or alternative products. In addition, schools and training units seem to offer mainstream programmes and there is little ground-breaking research. First steps to increase innovation could include:

- (a) Organizing study tours of regions with a similar setting that have implemented innovative solutions, for example regions in Poland or Baltic countries;
- (b) Inviting successful SMEs from other countries with skills that are relevant for Voznesensk. In some cases, SMEs might even pay their own costs in order to make connections with the Ukrainian market;
- (c) Proactively seeking financial support for international and regional knowledge exchange
- (d) Creating SMEs which are partly owned by the private sector and partly owned by the municipality

Inviting students from local and international universities for a summer competition on innovation.

32. **Promote bio-agriculture practices.** All of the city’s university programmes are agriculture-based, so it would be worth exploring a partnership between the municipality and the university to promote bio-agriculture by reducing the widely adopted use of fertilizers. This would create a high-quality and specialized market of organic products that could boost the local economy through exports but would also increase local food consumption and reduce dependency. Moreover, since organic products are healthier, this would have a positive impact on quality of life, and probably increase Voznesensk life expectancy figures.

Promote Connectivity and Tourism

33. **Upgrade the local transportation infrastructure.** Economic redevelopment is not possible without an efficient transport network. Funds should be allocated to repair and maintain the road network, which will then support further economic growth.

34. **Increase the number of Wi-Fi hotspots in the city.** Citizens are already familiar with the importance of ICT to the city’s operations, as shown by the citizens card. However, it would be beneficial to increase free public Wi-Fi spots to expand connectivity to the new digital economy. Young people, in particular, could then increase participation in the digital economy, developing employment opportunities that may lead to the city keeping its younger and more talented inhabitants.

35. **Strengthen the tourism industry.** The city’s location as the main regional centre and historic crossroads has the potential for increased revenues from the tourism sector, taking advantage of the history and natural environment. To increase the number of visitors, the municipality could allocate resources to organize two social media campaigns:

- (a) On the city’s natural environment;
- (b) On tourist activities such as motorball.

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1 http://www.fao.org/3/a-i4691e.pdf (see p. 213)
36. **Promote local tourism.** Voznesensk has many cultural and natural heritage sites which remain unexploited, calling for their promotion both at the national and international level. This would result in the creation of job opportunities for young and poor or informally paid people and also employ long-term and demotivated unemployed people. The most effective way to preserve culture and nature is to put it to use, and responsible tourism is the best tool for this as it provides the resources needed. For instance, by creating tourist attractions of mountain-bike routes and outdoor tours of the landscape\(^2\) valuable cultural heritage\(^1\), visitor numbers would rise leading to increased hotel business. This would boost the job market and create a wide range of opportunities for people looking for employment, as well as for entrepreneurs. Therefore, the city council should take the lead in making Voznesensk a “tourist destination” and start by launching a stakeholder public consultation to create partnerships and alliances with the private sector.

2. **Environment**

*Promote waste reduction*

37. To promote waste reduction and support circular economy at city level, it is recommended to:

(a) **Develop a city level system of solid waste recycling and promote awareness of recycling among the population.** The reduction of solid waste needs to be further explored as the municipal landfill has almost reached full capacity. Regional authorities have made several attempts to collect plastic, paper, glass and metal separately, but these have failed. Another attempt is expected to be implemented soon, however the city has no instruments for incentives or penalties. It is therefore recommended that the municipality develops a system of solid waste management based on recycling and elaborates activities aimed at raising public awareness on waste recycling, including educational programmes in schools;

(b) **Establish systems of wastewater management for the households not connected to the municipal wastewater system.** About 25% of households, mostly in remote areas of the town, are not connected to the municipal wastewater system. According to the study, there is low awareness among the inhabitants who are not connected to the municipal wastewater system about the importance of the separation of wastewaters from the water used for preparation of food or for gardening, for example, some inhabitants place the house garden next to a cesspit, which constitutes an obvious health risk. As the city cannot impose any legal measures to tackle these issues, two “soft measures” have been identified:

(c) **Establish collective systems for wastewater management.** If several households in the same neighbourhood decide to access the public wastewater system, the costs can be shared and will be considerably lower;

(d) **Develop measures to raise awareness among households about the health risks of uncontrolled wastewater disposal.**

(e) **Organise the collection and composting of tree leaves.** The burning of tree leaves in autumn creates a seasonal air pollution problem. One solution would be to create a central collection system for composting leaves, or controlled burning. The city has already started an information campaign and distribution of free collection sacks, and these measures need to be further enforced. Instead of burning the tree leaves, it is recommended to collect them centrally. Information about central collection should be channelled through the municipal website, schools, and poster. Moreover, there are many options to further process the leaves depending on the amount collected, including composting. This compost could be used in gardening or agriculture to increase humus content. The only requirement is space,

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\(^1\) See for instance, https://www.tripadvisor.es/LocationPhotos-g3569239-w8-Voznesensk_Mykolaiv_Oblast.html#129747432

\(^2\) http://www.ukraine.com/mykolayiv-oblast/voznesensk/
and a caretaker to occasionally turn the compost. The compost should be free for those who provide the leaves, and available at a low price for others to incentivize its use.

*Raise awareness about the preservation of the local environment*

38. To build awareness about the preservation of the local environment, it is recommended to:

(a) Develop school curricula on the preservation of the local environment, which would include provision of new knowledge to school children on the local plants and animal species, etc.;

(b) Organize nature excursions for parents and older people;

(c) Organize prizewinning photo competitions about the local nature;

(d) Organize competitions on how to improve the city’s natural capital;

(e) Select local endangered species as a mascot for the city.

3. **Society and Culture**

*Promote focus on high-quality school education supporting the development of qualifications required by the local economy*

39. In schools, create an “All students enrolment plan” in order to prevent drop-out of schoolchildren. Although drop-out rates in schools of Voznesensk stand at only 2%, no school-aged child should be out of school. Therefore, an “all-students enrolled” plan should be implemented, identifying non-enrolled students and promoting awareness of causes, for example lack of economic resources, disability, transportation issues and problem families. Support, including psychological assistance, should be available to parents and children.

40. At university level, design a specialized educational programme in partnership with local industry and service sector stakeholders. In addition, scholarships could be sponsored, and partners could offer on-site training to final-year students. This could lead to employment at the partner company once a degree is obtained.

*Promote healthy lifestyle among the population*

41. Launch a “healthier lifestyle engagement programme”. Life expectancy in Voznesensk is similar to the national average, but lower than the rural average. The city council could design a programme to promote healthier lifestyles. A similar quality of life issue arose during phase 1 of the workshop, where participants reported disabled people having difficulty living a normal life, as well as experiencing accessibility problems. The city council should address this issue directly by providing accessible transportation and removing barriers to access, especially to essential services such as health facilities.

*Improve social support system to the population*

42. Address the shortage of hospital personnel and equipment. The number of hospital beds per capita is one third of the country’s average, and some workshop participants reported a lack of hospital medical equipment and personnel. This is a structural issue that can only be addressed with central government investment and, eventually, with funds from donors. The city council should create an investment plan detailing the resources needed to reach Ukraine’s average standard as a minimum and present this plan to national authorities and international supporting bodies. Because financial resources are wasted in managing several hospitals, the closure of under-used local hospitals should be considered to provide investment to improve the central hospital. This would meet the high demand of patients for a better range of more modernized services.

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4 Voznesensk College of Mykolayiv National Agrarian University is located in Voznesensk.
43. Elaborate a “multi-purpose facility plan” to accommodate missing social and cultural services and activities. The UNECE’s Country Profile on Ukraine\(^5\) states that one reason Ukrainian local authorities have not developed public facilities is refusal to receive them from construction developers as they are difficult to maintain. This lack of public facilities was an issue discussed during the workshop. A simple usability analysis on existing public facilities in Voznesensk revealed that they are all single-purpose, and mostly underused. For instance, workshop participants said that the town has no movie theatre, but that one of the schools has an auditorium room that could serve this purpose. Therefore, the city council should identify and assess undiscovered needs to develop a “multi-purpose facility plan” to accommodate those missing services and activities within existing facilities by multi-tasking or rotating spaces. This could begin with place-mediating and place-making exercises with affected citizens as a first-hand method to discover currently unknown needs.

44. Provide affordable housing. One of the issues discussed in the workshop was the lack of affordable housing and low financial resources to access the housing market. The UNECE’s Country Profile on Ukraine offers a possible way forward. Local authorities could partner with housing cooperatives (as well as other forms of non-commercial citizen associations) to create financial mechanisms to grant access to the housing market\(^6\). However, the UNECE study warns that adequate legislation must be developed for this to be effective. With UNECE support, a 2018 new housing law is being developed which would devolve competence and powers on housing policy to cities. These legal changes would allow municipalities to facilitate the transfer of ownership rights from land owners of multi-apartment buildings to actual apartment owners. As a possible additional measure, central government and local authorities should make municipal debt securities more attractive to investors since these could be used to finance housing development programmes.

45. Create kindergarten placements. Kindergarten placements should be created within the aforementioned “multi-purpose facilities plan”. This will create employment opportunities and improve the quality of life of working families, especially working women.

46. Relocate residents from high-risk areas. The city council reported 210 cases of residents living under threat of natural hazards. Although the specifics are not known, the municipality should draft vulnerability-zone plans to help prioritize relocation of affected residents. This could be a pilot implementation under the new municipal-cooperative housing programme. It is worth noting that the fire brigade reported staff shortages, disaffection and demotivation as well as poor equipment.

47. Improve emergency time response. One of the solutions given by the WHO to improve time response in emergency situations is to switch from traditional ambulance vehicles to alternative ways of transport, such as motorbike-based assistance. In Vorznesensk, however motorbikes cannot be used during the snowy season, other alternative ways of transport could be considered.

\(^5\) https://www.unece.org/fileadmin/DAM/hlm/documents/Publications/CP_Ukraine_ECE.HPB.176.en.pdf (p.46) The importance of residential regeneration has been recognized in Ukraine since at least 2000 and some cities have tried to promote city-wide regeneration programmes; however, these have not been successful for various political, economic and social reasons. For example, there have been cases where a multifamily dwelling, its utility connections and social infrastructure are finished by the builder, but the local authority refuses to place the utility and social infrastructure on its balance sheet, as such structures are often considered to be very expensive. Local authorities are very reluctant to take responsibility for structures which were not developed under their control.

\(^6\) https://www.unece.org/fileadmin/DAM/hlm/documents/Publications/CP_Ukraine_ECE.HPB.176.en.pdf (p.69) Current civil legislation treats housing cooperatives as transitory; as long as shares are paid, the member of a cooperative becomes the owner of the housing unit and the apartment building turns into a condominium. That was not the case under Soviet legislation, when Ukrainian society got the valuable experience of building and managing apartment blocks as housing cooperatives. Now, housing cooperatives (as well as other forms of non-commercial associations of citizens) could be effective partners of public authorities and targeted for both state and municipal housing assistance programmes. Fostering the non-commercial sector will require the development of adequate legislation.
Launch a “zero crime” campaign: Although no there is no data on the number of police officers serving the city, participants manifested concern on high crime rates due to low police activity. It is however impossible to assess or recommend measures in this area as causes for low policing activity are not known. What can be advised is the launch of a “zero crime” campaign, emphasizing the importance of good behaviour for a better quality of life for all. It is also expected that proposals for the areas of economy, education and culture will reduce crime rates as employment increases.

Promote public participation in decision-making

Increase people’s participation in municipal elections and decision-making by improving access to information on municipal management. Participation in municipal elections could be improved by preparing public speeches before an election which clearly explain voting rules and procedures. In addition, physical accessibility should be improved, including increased provision of polling stations. Better information accessibility should make it easier for elderly people to find their polling station. To attract young voters, a page of the Voznesensk web site could give information about candidates, with interviews about their political programmes. This way everyone would be better prepared and informed and have better access to polling stations and the candidates’ policies.

Financial framework

Despite public budget shortages, Ukrainian tax law does not allow the city to increase revenues by increasing taxes. Options for reducing expenditure are similarly limited as the cost of operation, maintenance and modernization of assets is substantial. As the municipality’s capacity to pay interest and repay debt is also limited, other forms of funding need to be considered.

To increase available funding for municipal activities and proposed above sustainable development projects, it is recommended to:

(a) Use “off-balance sheet” structures such as small-scale Public Private Partnerships (PPPs) and ESCOs to finance investments, subject to the provisions above;
(b) Consider debt only for investments which generate enough cash flow to repay it;
(c) Attract grants to the largest extent possible, particularly for energy efficiency investments. This strategy is already being pursued successfully, but could be broadened further;
(d) Encourage entrepreneurship and support SMEs. A prosperous SME sector which goes beyond micro-enterprises will generate more income tax;
(e) Strengthen the internal institutional capacity to successfully manage these off-balance sheet projects and attract and manage external grant funding.

It is recommended that the city continues this financial approach, only borrowing at subsidized rates for projects which generate cash flow for loan repayment. Furthermore, the city should continue to attract grant funding or subsidized funds to finance future projects. This has proven to be a successful approach, yet the city may need to increase its institutional capacity – for example employing qualified senior staff with relevant experience in attracting a broader range of funds.

III. Conclusions

The analysis of the economic and social development of Voznesensk demonstrated that there is a considerable potential for the town’s economic social development based on the use of the local natural resources and agriculture. To realise this potential, the municipality needs to create a project management unit of a local smart city lab which would be able to develop and implement innovative activities as well as to monitor their implementation. High level management capacity of such a lab and an ability to work with
different organisations, promote cross-sectoral cooperation is a key to success to developing Voznesensk as a smart sustainable city.

54. A smart city is possible only when it relies on hard work and activities of dedicated people to promoting the local development. Promoting high-level educational system which educate local citizens interested to actively take part in the municipal management and are skilled to build new sustainable businesses is important. The education and awareness building about sustainable development is important to develop not only for young people but for all the population, including older generations. The study offers recommendations on what measures could be adopted.

55. Finally, the recommendations of this Smart Sustainable City Profile can be implemented only when there is a sustainable system to generate financial revenues for municipal economic, social and environmental projects and measures. A thorough review of the budgetary situation led to the conclusion that the budget was so far managed conservatively, without much borrowing - a strategy which relies on long-term funds to acquire assets. The study recommended that the city keeps this financial approach and only borrows at subsidized rates for projects generating cash flow for loan repayment. It is also recommended that the city continues to attract grant funding or subsidized funds to finance future projects. The city has been quite successful at this, but may need to increase its institutional capacity, for example, employing qualified senior staff with relevant experience, to attract an even broader range of funds. In addition, it should consider some of the innovative options to fund projects, such as ESCOs and PPPs, but be aware of their limitations and pitfalls.