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**PUBLIC PRIVATE PARTNERSHIP
DEVELOPMENT PROGRAM**

PUBLIC PRIVATE PARTNERSHIP APPRAISAL METHODOLOGY

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Public Private Partnership
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Ministry of Economic Development and Trade

Order # 255
February 27, 2012

Registered at the Ministry of Justice
of Ukraine
March 15, 2012
as # 399/20712

Certain issues of assessment of effectiveness of Public Private partnership implementation

In accordance with [Law of Ukraine “On Public Private Partnership “](#) and [Procedures on Public Private Partnership Effectiveness Appraisal](#) , approved by the resolution of the Council of Ministers of Ukraine from April 11, 2011 # 384, It IS ORDERED TO:

1. To approve as those that are supplemented:

[Public Private Partnership Feasibility Study Application Form](#) ,

[PPP Appraisal Methodology](#) .

2. To the Department of Investment and Innovation Policy and Public Private Partnership:

to submit the Order within the established order for state registration by the Ministry of Justice of Ukraine;

to publish the Order on the official web-site of the Ministry of Economic Development of Ukraine.

3. The oversight of the execution of the Order are to be left under my supervision.

4. This Order becomes effective from the day of its official publication.

V.P. Pavlenko

Deputy Minister
Of Economic Development and
Trade of Ukraine

Approved
The Order of the Ministry of
Economic Development and Trade
of Ukraine
February 27, 2012 # 255

Public Private Partnership
Feasibility Study Application Form

1. Resume, general characteristics of Public Private Partnership implementation (PPP).
 - 1.1. Preconditions of PPP implementation.
 - 1.2. Objectives and goals planned to be reached after PPP implementation.
 - 1.3. Correspondence with PPP requirements.
 - 1.4. Correspondence with state/regional strategic priorities.
 - 1.5. Object of PPP.
 - 1.6. PPP participants (private partner, areas of activity, prospects of development, public partner, scope of authority).
 - 1.7. PPP Implementation Plan (list of activities, project capacity, project terms, etc.).
 - 1.8. PPP management scheme.
 - 1.9. PPP legal background (normative regulatory acts entitled to PPP implementation in appropriate sectors/specific).
2. PPP Implementation Social and Economic Assessment.
 - 2.1. Description of Market Environment (supply and demand indices, tendencies, pricing, consumer target groups, technologies, other market features concerned with PPP implementation).
 - 2.2. Social Assessment (analysis of territory and population under PPP project impact, social consequences of PPP implementation).
 - 2.3. Economic Assessment (PPP implementation economic benefits and losses, Economic Net Profit Value ENPV, economic impact for PPP participants, etc).
 - 2.4. Environmental Assessment (PPP impact on environment, activities aimed at minimizing negative impacts).
3. Financial Assessment.
 - 3.1. Alternatives to PPP (general comparison of advantages, disadvantages, financial impact, risks, technical details, etc.)
 - 3.2. Key financial indices (Property Index (PI), Net Profit Value (NPV), internal rate of return (IRR), discounted payback period (DPP)).
 - 3.3. PPP Financing (sources, conditions).
 - 3.4. State support (support needs, form, amount).

3.5. Correlation of revenues and expenses of state/local budgets (foreseen midterm budget expenses and incomings).

4. PPP Risk Assessment.

4.1. Risk types, associated with PPP.

4.2. Qualitative and quantitative risk evaluation.

4.3. Division of responsibility.

4.4. Minimization (liquidation) risk emergence impacts.

5. PPP implementation form (Selection background).

6. Essential PPP agreement conditions (parties' rights and obligations, condition of land appropriation, conditions of private partner replacement, reporting, dissolution of a contract, etc.)

7. Conclusions.

Gnattsov O.V.

Department of Investment, Innovation
Policy and Public Private Partnership

APPROVED BY
Order # 255
of the Ministry of
Economic Development
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Public-Private Partnership Appraisal Methodology

I. General Provisions

1.1. This Methodology is intended for appraising the effectiveness of projects of public-private partnership (hereinafter referred to as PPP).

1.2. The term meanings of this Methodology have the same meaning as those in Procedures on Public Private Partnership Effectiveness Appraisal approved by the Regulation of the Cabinet of Ministers from April 11, 2011 #384 (Procedures).

1.3. This Methodology is utilized during the appraisal of PPP effectiveness by:

executive authorities (in case PPP is initiated by such executive authority) or after submission of PPP proposal by a private partner ;

the Ministry of Economic Development and Trade of Ukraine in case of a decision to carry out PPP Effectiveness Appraisal.

1.4. The PPP appraisal is divided into stages defined by Procedures based on the information submitted in PPP proposal, PPP Feasibility Study and other documents that are being prepared and submitted in accordance with Procedures:

2. PPP Appraisal Stage 1

2.1. Analysis of General Partnership Characteristics

The appraisal begins with checking the completeness and sufficiency of the general PPP characteristics against the criteria presented below in Table 1.

Table 1

Checking the completeness and sufficiency of the general PPP characteristics

No	Criteria	Completeness and sufficiency are acceptable	Significant supplementing required
1.	The PPP goal, planned results, and ways to achieve them		
2.	List of issues to be resolved through the PPP and basic requirements for the PPP project		

3.	Basic requirements for the services to be provided, works to be performed, or goods to be produced through the PPP		
4.	Information about the object of partnership, with its main characteristics specified		
5.	Compliance with the strategic development priorities of the state or relevant region		
6.	Compliance with definition of PPP in accordance with the current legislation		
7.	Sufficiency of the powers vested in the executive authority for the PPP		
8.	Proved feasibility of the PPP for the private partner		
9.	List of indicators for controlling and monitoring the PPP results, which ensure uninterrupted monitoring and supervision of the PPP implementation process throughout the PPP term. These indicators are required to be accurate, measurable, and valid for the long term		

2.2. Analysis of the Market Environment in which the PPP Is to Be Carried Out

This analysis is intended to verify the completeness and sufficiency of the data reflecting qualitative and quantitative characteristics of the market environment against the indicative criteria listed in Table 3 below.

Table 2

Checking the completeness and sufficiency of the data reflecting qualitative and quantitative characteristics of the market environment

No	Criteria	Completeness and sufficiency acceptable	Significant supplementing required
1.	Quantitative characteristics of demand		
2.	Quantitative characteristics of supply		
3.	Demand satisfaction level		
4.	Demand trends		
5.	Pricing strategy		
6.	Sales scheme		
7.	Identification of the target groups of		

	consumers (users)		
8.	Regulatory, legal environment		
9.	Cost of the design, construction, functioning and operation of the PPP project		
10.	Other market characteristics concerning the specifics of the PPP project		

2.3. Analysis of the PPP Management System

This analysis is intended to check the developed PPP management system broken down by functional management subsystems listed in Table 4 below to ensure their presence and implementation completeness. While checking the allocation of responsibilities between the private and governmental partners, the degree of detail should be taken into account.

Table 3 PPP Management System

No	Management subsystems	Completeness and sufficiency acceptable	Significant supplementing required
1.	General approaches to forming a PPP implementation team		
2.	Policy of using external consultants and advisors		
3.	Management of the project content and volumes of works		
4.	Works duration and time management		
5.	Human resources management		
6.	Management of project changes		
7.	Resources management		
8.	Information and communications management		

2.4. Analysis of Socio-Economic Impact

The purpose of the socio-economic analysis is to establish:

the admissibility of PPP variants from the viewpoint of consumers (users) and the population of the region as a whole and to adapt the PPP communication strategy to ensure popular support and achievement of the PPP goals aimed at improving the standard of life of the population,

the quantitative impact of PPP implementation on the economy and society in whole;
 economic consequences for interested parties;

This analysis focuses on checking the PPP socio-economic indicators whose basic list is provided in Table 5 to ensure their completeness and sufficiency.

Table 4

Checking the availability, completeness, and sufficiency of information related to the basic PPP socio-economic indicators

No	Indicators	Completeness and sufficiency acceptable	Significant supplementing required
1.	Size of the area to be covered by the PPP project		
2.	Population (general figure, and, if necessary, a breakdown by strata, groups, and categories)		
3.	Assumptions regarding social admissibility of or controversial views on the PPP		
4.	Population groups covered by the project in terms of supporters and opponents		
5.	Admissibility of the project from the historical and cultural, ethnical-demographic, and socio-economic viewpoints		
6.	Potential social harm (undesirable intervention in the customary way of life, cultural traditions, and life support systems) and the target ethnic and social groups that are likely to be affected		
7.	Study of the popular opinion in the region about the project and identification of possible compensatory and preventive measures to neutralize any negative effects		
8.	The quality of the goods, works, and services that were produced and provided as of the date of proposal preparation, and expected effect of the PPP on this quality		
9.	Prices and rates for goods, works, and services as of the moment of proposal preparation and effect of the PPP on such prices		

10.	Effect of the PPP on related industries		
11.	Potential negative social consequences or advantages of the public-private partnership.		

In case the costs of PPP implementation cannot be covered through consumer fees or through the operation (i.e. pricing process is not based on cost recovery, but by means of state regulation), it should be proven that economic benefits of PPP implementation (often assessed based on the readiness of consumers to pay for goods or services) exceed economic costs.

Table 5

Criteria of analysis of the economic assessment results

No	Criteria	Yes	No
1	Have the economic advantages of the PPP been estimated?		
2	Have the costs of the PPP been estimated?		
3	Has the difference between the indicators provided in items 1 and 2 been calculated?		

The positive difference: the expected net present value (ENPV) calculated using the appropriate economic discount rate is the criterion showing the economic soundness of the PPP on a quantitative basis.

The explanation to ENVP calculation if offered in Attachment 1 of the PPP Appraisal Methodology.

The economic analysis embraces the PPP results (effects) that have no market value in monetary terms but create negative or positive effects on the part of the population that are not direct consumers of the services. It is necessary to check the availability and soundness of the calculated values of such results (effects) against the criteria listed below in Table 6.

Table 6

Criteria for checking the calculated values of the results (effects) that have no market value in monetary terms

No	Criteria	Availability and soundness	
		Yes	No
1.	Appraisal of the market value of the contributions (land, materials, hired workforce) to the PPP, adjusted for fluctuations in the rates of taxes, subsidies etc		

2.	Willingness to pay (that is, how much more people will be ready to pay). This is only an assumption and does not mean that they will actually make such payments.		
3.	Value appraisal of secondary (or cross) expenses and advantages that have an effect beyond the PPP (external effect), in other words, the effect of the PPP on macro economy		
4.	Value appraisal of non-market factors – socio-economic and environmental		

It is necessary to assess the probability and amount of losses resulting from the PPP for one party, with simultaneous advantages for the other parties. In addition to the expenses and profits calculated in the basic financial model, it is also necessary to calculate and take into account all other expenses and profits for society as a whole that are evident from the economic assessment.

This analysis may result in recommendations regarding the implementation of compensatory mechanisms, if established that a group of stakeholders suffers considerable losses as a result of the implemented PPP and lack of any positive changes or reimbursement mechanisms.

It is necessary to check the presence of the assessment of economic consequences for stakeholders, using the criteria listed below in Table 7.

Table 7

Criteria for checking the assessment of economic consequences for stakeholders

No	Criteria	Yes	No
1.	Has the possibility of considerable losses for one or a few PPP parties been considered?		
2.	Is there a substantiation of the admissibility (acceptability) of such losses?		
3.	Are there any satisfactory compensatory mechanisms envisaged?		

2.5. Analysis of environmental impact of PPP implementation

The goal of the analysis is to determine the impact of PPP implementation on environment, to assess all benefits and costs that may occur as a consequence of PPP implementation and to define activities to minimize any damage to environment.

Table 8

Data verification questions intended for determining upstream environmental conditions for the PPP

No	Questions	Yes	No	No need
1.	Are there any relevant measures envisaged to control and mitigate potential consequences of the project for environment?			-----
2.	Is it envisaged that an environmental supervision system is to be deployed (when necessary), including PPP functioning monitoring			
3.	Is there an environmental expert examination envisaged within the PPP framework?			

Environmental impact assessment is mandatory in case PPP implementation has negative impact.

2.6. PPP Appraisal Methodology Stage 1 Results

The result of the Stage 1 of PPP Appraisal Methodology is a substantial generalized judgment on one of the following options:

Conclusions of environment impact assessment is attached to PPP Appraisal Methodology.

provided information in major issues is full and proves the feasibility of PPP implementation – PPP proposal is acceptable;

provided information is not sufficient and requires significant additions – PPP proposal requires significant revisions;

provided information proves insufficiency of PPP proposal – PPP proposal is not acceptable.

3. Stage 2 of the PPP Appraisal Methodology

3.1. Analysis of Alternative Ways to Achieve the PPP Goal

The next step is checking alternative ways of achieving the goal; in other words, would it be more reasonable to achieve the same goal without the PPP (for example, through direct funding from the state budget or state purchases).

The analysis involves analyzing the alternatives against the criteria (parameters) listed in below in Table 9.

Table 9

Checklist of criteria against which alternatives to the PPP to be analyzed

No	Parameter	Yes	No
1.	Have the alternative ways of achieving the goal been considered sufficiently in detail?		
2.	Have the advantages and shortcomings of the alternative ways been considered sufficiently?		
3.	Have the financial effect, including cash flows generation ways (state or local budget, payments by consumers (users) etc) been compared		
4.	Have the major risks (threats) associated with the efforts to achieve the goal been compared?		
5.	Have the technical and technological aspects been compared?		
6.	Have any clear advantages of the PPP for achieving the goal been established in each of the aforementioned aspects?		

The results of the comparative analysis of alternatives make it possible to decide whether or not the chosen PPP approach is good enough for achieving the goal.

3.2. Financial Review

The purpose of the financial review is to determine the financial expedience of the PPP from the viewpoint of each stakeholder, specifically, the private partner, public partner, and potential creditors. The analytical part of this study should contain a table reflecting estimated financial structure, including financing sources.

The object of the financial analysis is the basic PPP financial model (to be created in) developed by the management on the basis of baseline data.

The basic financial model (to be created in MS Office Excel) is evaluated against the following criteria:

- 1) Clear and understandable structure, apt format
- 2) Separated incoming data, calculations, and results
- 3) Separated assumption tables and summary tables
- 4) Formulas incorporated in the model (automatic calculations)
- 5) Careful documentation of all assumptions and incoming data

The financial indicators of the basic financial model are evaluated in accordance with the criteria of their availability (presence), correctness of the formula and arithmetic operations, and suitable interpretation as shown in Table 10.

Table 10

Criteria for evaluating the key financial indicators of the basic financial model

No	Indicators	The indicator is present, formula and arithmetic operations correct, and interpretation is correct	
		Yes	No
1.	Profitability Index (Profit Investment Ratio) for PPP project (PI ₁)		
2.	Profitability Index (Profit Investment Ratio) for the state and/or local budgets in connection with the PPP (budgetary effect) (PI ₂)		
3.1	Net present value of the PPP from the point of view of the project, (NPV ₁)		
3.2	Net present value of the PPP from the point of view of the company shareholders (NPV ₂)		
4.1	Financial efficiency (internal rate of return) from the point of view of the project, (IRR ₁)		
4.2	Financial efficiency (internal rate of return) from the point of view of the company shareholders, (IRR ₂)		
5.	Discounted payback period (DPP)		

Explanations and the formulas to calculate these indicators are presented in Annex 2 to this Methodology.

Checking the PPP funding terms and conditions for availability and information completeness against the criteria stated below in Table 11.

Table 11

Criteria for checking the PPP financing terms and conditions

No	Criteria	Yes	No
1.	Are the indicative terms for drawing credit resources to finance the PPP identified/ estimated?		
2.	Are the financial sources and schedule established?		
3.	Is there any convincing argumentation in place proving the need for state support?		
4.	Are the forms and volume of state support determined (if necessary)?		

5.	Are the state/local guarantees foreseen for debt obligations?		
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The check of availability and authenticity of calculations of state/local budget flows “before” and “after” according to parameters is offered in the Table 12

Table 12

Criteria for checking the assessment of economic consequences for stakeholders

No	Criteria	Yes	No
1.	Is there a calculation of direct liabilities of the state budget and/or lower level budgets to the private partner as required by the PPP agreement (or another relevant agreement) based on the services accessibility or provision?		
2.	Is there a calculation of contingent payment liabilities under the PPP agreement (or another relevant agreement)?		
3.	Is there a calculation of obligatory fees and tax payments from the private partner PPP in favor of the state or a local self-governance body?		

3.3 PPP Appraisal Methodology Stage 2 Results

The result of PPP Appraisal Methodology Stage 2 is the substantial judgment according to one of the following options:

provided information on Financial Review in major issues is full and proves the feasibility of PPP implementation – PPP proposal is acceptable;

provided information proves insufficiency of PPP proposal.

4. PPP Appraisal Methodology Stage 3.

4.1. Risk Analysis of PPP Implementation

Detection of potential PPP implementation risks, its analysis and determination of the formats of their management is carried out in accordance with the Methodology of detection of PPP implementation risks, their analysis and determination of risk management format, approved by the Cabinet of Ministers of Ukraine from February 16, 2011 #232 (Methodology).

4.2. PPP Appraisal Methodology Stage 3 Results

In accordance with the Stage 3 of PPP Appraisal Methodology a List of detected risks and Report on potential risks are compiled pursuant to Methodology.

5. PPP appraisal Methodology Stage 5

5.1. Analysis of Design of PPP Arrangements, provided the results of previous Appraisal Stages and other significant conditions of potential PPP agreement, is carried out according to criteria offered in table 15. Clarity of definition and justification of parameters is especially evaluated.

Table 13.Design of the PPP Arrangements

No	Criteria	Completion mark (done/ not done*)	Admissibility opinion (yes/no)
1	Participants of PPP, their main rights and responsibilities, format of cooperation		
2	PPP Implementation format		
3	Terms of PPP Implementation		
4	Terms of performance and scope of necessary project documents		
5	Minimum investments		
6	Conditions of land allocation (including division of responsibilities for land allocation activities)		
7	Conditions of returning PPP facility after the end of agreement as well as its terms and procedures		
8	Format and content of reporting including implementation terms		
9	Requirements of private partner performance indices		
10	Indicators of performance results sufficiency (quality of a product, services, scope and terms of production, implementation)		
11	Correct statement of requirement to performance indicators (contract results) by a private partner		
12	Change of performance requirements (contract results) by a private partner during the term of agreement		

13	Including requirements of project design, materials, construction works and equipment into performance requirements of a private partner		
14	All sources of financing necessary for private partner compensation		
15	Payment conditions		
16	Responsibility for non-performance or unsatisfactory performance		
17	Interconnection between payment mechanisms and performance requirements of a private partner		
18	Incentive in regard to high performance of a private partner (its appropriate amount for contract delivery)		
19	Correction payment mechanisms that can be used during the terms of agreement		
20	Division of development risks		
21	Division of project design risks and construction risks		
22	Division of financial risks		
23	Division of operational risks		
24	Division of market environment risks		
25	Division of legislative and regulatory risks		

5.2 PPP Appraisal Methodology Stage 5 Results

The result of PPP Appraisal Methodology Stage 2 is the substantial judgment according to one of the following options:

provided information in major issues is full and proves the feasibility of PPP implementation – PPP proposal is acceptable;

provided information is not sufficient and requires significant additions – PPP proposal requires significant revisions;

provided information proves insufficiency of PPP proposal.

6. Preparation of an Opinion on the Results of PPP Appraisal

Upon the results of PPP appraisal, a generalized opinion is prepared taking into account the analysis results for each item of the analysis stages.

When preparing the opinion, it is necessary to make sure that the indicators provided in Table 14 have been exhaustively analyzed and opinions made on each of them.

Table 14

Basic indicators for preparing an opinion upon the results of PPP appraisal

No	Indicators	Completion mark (done/ not done*)	Admissibility opinion (yes/no)
1.	Stage 1		
1.1	Analysis of general PPP characteristics		
1.2	Analysis of the market environment existing for the PPP		
1.3	Analysis of the PPP management system		
1.4	Analysis of socio-economic impact		
1.5	Analysis of environmental impact		
2	Stage 2		
2.1	PPP Alternative options analysis		
2.2	Financial analysis		
3	Stage 3		
3.1	Risk analysis		
4	Stage 4		
4.1	PPP Design Analysis		

* If “not done” is selected, the reasons for the failure to complete should be cited.

Further, essential PPP agreement terms should be appraised as to the criteria given in the Table 18 below.

When deciding on the expediency of a PPP, the following conditions should be taken into consideration:

- the possibility to achieve the set goal through the PPP;

- the fact of any serious legislative restrictions that forbid or significantly complicate the PPP;

- PPP would be allowable irrespective of whether the NPV or IRR is positive for the public partner, if the PPP socio-economic effect is positive and NPV and IRR are acceptable for private partner;

- the best distribution of risks between the public and private partner in the PPP; and

- the availability of an environmental risk management system for the PPP, which prevents disasters and any other negative environmental consequences.

The Opinion is required to be made in the Ukrainian language, signed by an authorized representative of the management body and sealed; all its pages are required to be bound together and numbered.

O. H. Hnatsov

Director of the Department for
the Investment and Innovation Policy and
Development of Public-Private Partnership

Attachment 1
to PPP Appraisal Methodology

CALCULATION OF (Economic Net Profit Value) ENPV

Criteria	Calculation formula
Economic Net profit Value (ENPV)	$NPV = \sum_{k=1}^n \frac{NCF_k}{(1+r_k)^k} - \sum_{j=1}^m \frac{I_j}{(1+r_j)^j}$ <p> n – projected perios; k – year in a projected period; NCFk – Net Cash Flow in a year k; rk – annual discount rate in a year k; m – years planned for project investment; j – year in which investment is carried out; Ij – investments (costs) per year j; rj – annual discount rate in a year j. </p>

Economic Net Profit Value (ENPV) is calculated NPV (Attachment 2), but using economic cost and benefit flows on the general level of state/regional/local depending on the size of PPP.

O. H. Hnatsov

Director of the Department for
the Investment and Innovation Policy and
Development of Public-Private Partnership

Attachment 2
to PPP Appraisal Methodology

[EXPLANATION OF A FORMULA for calculation of Financial Model key indices](#)

Attachment 3
to PPP Appraisal Methodology

Comparative table
in regard to PPP financial effectiveness with and without private partner involvement

#	Parameters	Basic Financial Model	Alternative
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		(including private partner)	option (without private partner)
1	Profitability index (correlation of costs and benefits), calculated for project as whole (PI1)		
2	Profitability Index (correlation of costs and benefits in state and local budgets (budget effect)), calculated for interested parties (PI2)		
3	(NPV1)		
4	Net Profit Value, calculated for a project, calculated for interested parties (NPV2)		
5	Internal Rate of Return, calculated for project (IRR1)		
6	Internal Rate of Return, calculated for interested parties (IRR2)		
7	Discounted Payback Period (DPP)		

O. H. Hnatsov

Director of the Department for
the Investment and Innovation Policy
and
Development of Public-Private
Partnership