PART 2 APEC ENGINEER ASSESSMENT STATEMENT SUBMISSION GUIDE

Introduction

The APEC Engineer Assessment Statement facilitates the transparency of engineer recognition systems applied by each APEC Engineer Monitoring Committee. *The Guide is not prescriptive, but where appropriate, its use for submissions is encouraged*.

Objective

The Assessment Statement Submission Guide (the Guide) at Appendix I is to enable Monitoring Committees to present a reasonably consistent structure in all Assessment Statements. It is intended to be sufficiently broad to accommodate the different recognition practices for professional engineers of engineering disciplines identified by participating APEC member economies.

This structure is preferred for:

- convenient collation and consistent presentation of transparent registration information by the Monitoring Committee of each participating member economy;
- consideration of Assessment Statements by the APEC Engineer Coordinating Committee; and
- subsequent ease of access and understanding of all APEC Engineer Registers by participants.

Structure of Assessment Statements

APEC Engineer Assessment Statements for each participating economy provide fundamental information on the

- organisation and administration of the APEC Engineer Register;
- identification of engineering disciplines for the APEC Engineer (see Appendix III - Guide to APEC Engineer Disciplines for Registration);
- compliance of criteria used by participating economies with the APEC Engineer Substantial Equivalence Framework criteria; and
- assessment processes and records of assessment for each APEC Engineer.

Supporting Documentation

Principal supporting documents may be attached to Assessment Statements.

Reference should be made to other relevant publications used in the assessment process. Where such reference is made a synopsis of the publication should be provided. Publications so referenced should be made available on request to members of the APEC Engineer Coordinating Committee and to

participating APEC economies. A copy should be made available at meetings considering submissions for the conduct of an APEC Engineer Register.

Administration

The Guide is made available to the participating member economies through the contact representative of each Monitoring Committee.

A Flow Chart for the APEC Engineer Assessment Statement submission process is at Appendix II.

Contact representatives of participating economies are asked to

- coordinate Assessment Statement submissions in the format of Attachment I with the relevant engineering organisations in their economy, and with other organisations that are involved in the preparation of an APEC Engineer Register; and to

- forward the submissions direct to the contacts for other member economies participating in the APEC Engineer Register and a copy to the Secretariat of the APEC Engineer Coordinating Committee. See addresses below.

Outcomes from the APEC Engineer Coordinating Committee meetings will be advised to the contact representatives of economies participating in the APEC Engineer. Member economies working towards the development of Monitoring Committees and Assessment Statements will also be advised of Assessment Statements received for consideration and of the outcomes of meetings.

Liaison is encouraged directly between originators of Assessment Statements. Assistance may be obtained from the Secretariat and members of the APEC Engineer Coordinating Committee.

Submissions of Assessment Statements must be in English, preferably in electronic format.

Contacts

Secretariat
APEC Engineer Coordinating Committee

Appendices

Appendix I - APEC Engineer Register Assessment Statement
Appendix II - Assessment Statement Flow Chart

Appendix I: APEC Engineer Register (Member Economy) (Draft) Assessment Statement Engineering (Disciplines)

Introduction

The Monitoring Committee recognises the following bodies and mechanisms for the assessment of (discipline) engineers as eligible to be placed on the (member economy) APEC Engineer Register.

This Assessment Statement provides fundamental information on the overall assessment mechanism used for (discipline/s) engineering submitted for recognition as part of the APEC Engineer Register.

Approved Assessment Statements developed in accordance with this Guide may be sought directly from participating economies or through the APEC Engineer Coordinating Committee Secretariat.

PART A - THE MONITORING COMMITTEE

Chair
Members
Contact person, including contact details

A brief statement of current or recent appointments held by the Chair and members may be appropriate.

PART B - ASSESSMENT MECHANISMS

A brief description of each assessing body and mechanism is required with reference to specific documentation. Principal documents may be attached, other documents may be referenced and tabled at reviews, and be available on request.

The Assessment Statement may include:

- mechanisms applicable to practitioners in all disciplines;
- mechanisms applicable to practitioners in specified disciplines;
- national, regional and provincial mechanisms;
- superseded mechanisms.

Please include for each part of the Assessment Statement:

- Title of each assessment mechanism recognised by the Monitoring Committee;
- Name of each assessing body recognised by the Monitoring Committee;
- Principal person and contact person for each body; and
- Contact details

1. Accreditation or recognition of higher engineering education programs

1a. Assessment Mechanisms

Details of current accreditation or recognition mechanisms to confirm and ensure the quality of (discipline/s) engineering education in universities or higher education institutions.

1b. Alternative Assessment Mechanisms

Details of current alternative mechanisms other than the above accreditation or recognition mechanism to confirm and ensure equivalence in education standard of other candidates.

1c. Superseded Assessment Mechanisms

Brief information on any superseded assessment mechanisms, and period of use, that were used for the assessment of higher education of more senior candidates for APEC Engineer Registration.

2. Assessment for independent practice

2a. Outline of Current Assessment Mechanism for Independent Practice in (Discipline/s) Engineering.

- Overview,
- Structure of application by candidate,
- Structure of applicant's report - where required,
- Continued professional development requirements,
- Structure of written or oral examination of candidate - where required,
- Structure of interview of candidate - where required,
- Approval conditions, for example compliance with code of conduct.

2b. Outline of Superseded Assessment Mechanism for Independent Engineering Practice in (Discipline/s) Engineering

Brief information on any superseded assessment mechanisms, and period of use, that were used for the assessment of independent practice by more senior candidates for APEC Engineer Registration.

3. Particular APEC engineer assessment items

3a. Seven Years Experience after Graduation in (Discipline/s) Engineering

- Overview
- Structure of applicant's report - where required
- Structure of written or oral examination of candidate- where required
- Structure of interview of candidate - where required

3b. Two Years Experience in Responsible Charge of Significant Engineering Work

- Overview
- Structure of applicant's report - where required
- Structure of written or oral examination of candidate - where required
- Structure of interview of candidate - where required

3c. Professional Development

State the body responsible for the professional development of (discipline) engineers and provide a brief statement of the policy, objectives, organisation, audit and management system for professional development. State the periods of application of assessment mechanisms where changes have occurred.

3d. Compliance with Code of Conduct

State the engineer body responsible for the code of conduct, the code of conduct and the mechanism for assessing compliance with the code.

4. Audit of APEC engineers

State the engineer body recognised by the Monitoring Committee and the audit mechanism for the APEC Engineer registrants of the member economy.

PART C - ENGINEERING DISCIPLINES

Provide information on the scope of education programs and on the areas of practice for engineering disciplines nominated for registration.

PART D - ASSESSMENT DOCUMENTATION AND REPORTS

The following should be attached to the Assessment Statement

- Cover sheet
- Guide for Candidates and Assessors
- Application Form for Candidates (See example at Attachment 1)
- Assessment Report (See example at Attachment 2)
- Particular information on interpretations of the APEC Engineer Framework (See example at Attachment 3)

PART E - ATTACHMENTS AND REFERENCES

List of Other Attachments and References

ATTACHMENTS

Attachment 1	Monitoring Committee Summary of Assessment of Applicant for APEC Engineer Registration
Attachment 2	Example - Significant Engineering Work Application For APEC Engineer Registration
Attachment 3	Example - Career of Registered Engineer to be Recommended as APEC Engineer and Simulation for the Sampling of Significant Engineering Work
Attachment 4	Detailed Description of Two Years Experience in Responsible Charge of Significant Engineering Work
Attachment 5	Education Programs and Typical Management Skills

Appendix I - Attachment 1

Monitoring Committee Summary of Assessment of Applicant for APEC Engineer Registration

Name of Applicant:

Qualification, and place and date obtained:

Registered Engineer Registration No.:

Registered Engineer Registration Date:

Registered Engineer's Discipline:

APEC Engineer Register Discipline:

Certified Compliance with APEC Engineer Criteria:

Completed an accredited or recognised engineering program, or assessed recognised equivalent	
Been assessed within their own economy as eligible for independent practice	
Gained a minimum of seven years practical experience since graduation	
Spent at least two years in responsible charge of significant engineering work	
Maintained their continuing professional development at a satisfactory level.	

Confirmed signature on statement of compliance with codes of ethics	

Signed

Officer delegated by
APEC Engineer Monitoring Committee

Appendix I - Attachment 2

Example - Significant Engineering Work Application For APEC Engineer Registration (Draft)

(Reference: Tabled by Japan at Expert Advisory Group Meeting in Japan, July 1999)

Receipt No.:
Qualification:
Registered Engineer Registration No.:
Registered Engineer Registration Date:
Name of Registered Engineer's Discipline:
Name of Applicant:
Date of Birth:
Address:
Place of Employment:
Company Name:
Address:

I wish to be placed on the APEC Engineer Register and apply as described below in accordance with the provision that defines two years experience in responsible charge of significant engineering work.

1. Engineering Work Experience (Describe in a retrospective order, beginning with the most recent one.)

				Attestant's Column		
Work No.	Starting Date/ Ending Date (months)	Name of Organization/ Position/ Title	Name of Work	Signature	Relationship of Signor to Applicant	Tel/Fax

Note: The signor shall be, in principle, the contractor who employed the applicant. Otherwise, the signor shall be the representative of the organization under which the applicant executed his engineering work.

2. Detailed Description of Engineering Work
(Describe, in detail, each work listed in the preceding page.)

Work No.	Position in Engineering Work	Contents of Work (Describe the contents and significance of the work, the applicant's role, and the degree of the applicant's responsibility using about 50words.)

Note: Make a copy of this sheet when an extra sheet is needed.

I hereby swear that the above descriptions are true.

Date:

To APEC Engineer Monitoring Committee

Applicant's name: Signature:

Appendix I - Attachment 3

Example - Career of Registered Engineer to be Recommended as APEC Engineer and Simulation for the Sampling of Significant Engineering Work

(Reference: Tabled by Japan at Expert Advisory Group Meeting in Japan, July 1999)

Examples of Registered Engineer	Mr. A Civil Engineering Consultant	
Age/DOB	31 yrs/September 22, 1967	
Technical Discipline Optional Subject	Civil Engineering Urban and Rural City Planning	
Final Academic Background	Graduated from Department of Engineering, Engineering Faculty, University, in 1990	
Age	**Project Owner Classification**	**Project Name, Number of Months of Experience in Significant Engineering Work, and Summary**
25	Ward	Arterial road network improvement planning
26	PWRI	Study of methods for planning and adjusting buildings and road facilities Study of relationship between street image and landscape elements
27	Ministry City	Establishment of urban landscape improvement plan (6 months) (Serving as the coordinator among the localities who mutually have complex interests, Mr. A worked out a plan.) Establishment of integrated basic plan for built-up urban area redevelopment (6months) (Serving as the coordinator between the municipalities and localities, Mr. A worked out an integrated basic plan for built-up urban area redevelopment.)
28	Public Works Research Institute (PWRI) Ministry	Preparation of guideline for streetscape development (draft) (3 months) (Mr. A worked out a draft guideline on the basis of a new concept, i.e., streetscape.) Study of Policy for Environmental improvement in Urban and Regional Areas (2 months) (Mr. A studied the policy. by reviewing medieval roads and buildings along such roads from a new angle.)
29	Ministry Prefecture	Preparation of an environmental improvement plan (4 months) (Mr. A worked out a plan to improve highways of olden times from a new viewpoint by taking into consideration natural, historical and cultural resources in a regional area.) Preparation of an integrated “Historical Road” improvement and utilization plan
30	City	Preparation of plan for development of areas surrounding a new interchange (4 months) (Serving as the coordinator between the authorities concerned and the localities and working in tie-up with both parties, Mr. A worked out a plan.)
Sum of Experiences in Responsible Charge of Significant Engineering Work (Shaded)		25 months

Note: The shaded portion indicates engineering work presumed to be described in an application as chief engineer’s experiences equivalent to “experiences in responsible charge of significant engineering work”.

Appendix I - Attachment 4

Detailed Description of Two Years Experience in Responsible Charge of Significant Engineering Work

(Reference: Tabled by Japan at Expert Advisory Group Meeting in Japan, July 1999)

Concerning "Experiences in the execution of engineering work under complicated conditions, or engineering work requiring new concepts, or engineering work involving a plurality of different disciplines", the contents of more realistically presumed experiences are described below.

1. Experiences as chief or higher-position engineer (not in assisting engineer position) in charge of engineering work executed under complicated conditions

   Complicated conditions
   - The site is topologically complicated.
   - Other structures are located close to the planned structures.
   - There are strict safety and environmental requirements.
   - The construction schedule is tight.
   - There are many authorities concerned among which coordination is required.
   - Public relations are difficult.

2. Experiences as chief or higher-position engineer (engineer not in assisting position) in charge of engineering work requiring new concepts.

   - New concept
   - New technologies
   - New working methods
   - New solutions
   - New techniques

3. Experiences as chief or higher-position engineer (engineer not in assisting position) in charge of engineering work involving a plurality of different disciplines.

   - Engineering work requiring expertise covering various disciplines;

   - Engineering work in which a plurality of different disciplines is involved or engineering work requiring coordination among the engineers of different disciplines.

4. Experiences in engineering work equivalent to 1 through 3 above

Appendix I - Attachment 5

Education Programs and Typical Management Skills

The APEC Engineer recognises that the responsibilities undertaken by engineers often evolve during their career, reflecting an increasing emphasis on management roles as well as professional development based upon appropriate engineering education.

Education Programs

A balance of theoretical and applied content is expected in higher education programs to enable APEC Engineers to engage in an area of engineering practice upon graduation. The *Discussion Paper December 1997* proposed that all recognised programs cover the following principal and supplementary fields of study:

Principal Fields

- Mathematics & Physical Sciences
- Engineering Sciences
- Engineering Analysis and Design

Supplementary Fields

- Communication
- Management
- Ethics

Typical Management Skills and Activities Applicable to Engineering Disciplines

Managerial skills and activities associated with experience in an engineering discipline and practiced in an engineering environment might typically include:

- General management
- Project management
- Quality assurance and total quality management
- Marketing of engineering products or services
- Financial or human resource management
- Design and delivery of training programs
- Policy development
- Regulation development

These activities will normally involve leadership, teamwork, oral and written communications, presentations, and interpersonal skills in the practice of all engineering disciplines.

Appendix II: Assessment Statement Flow Chart